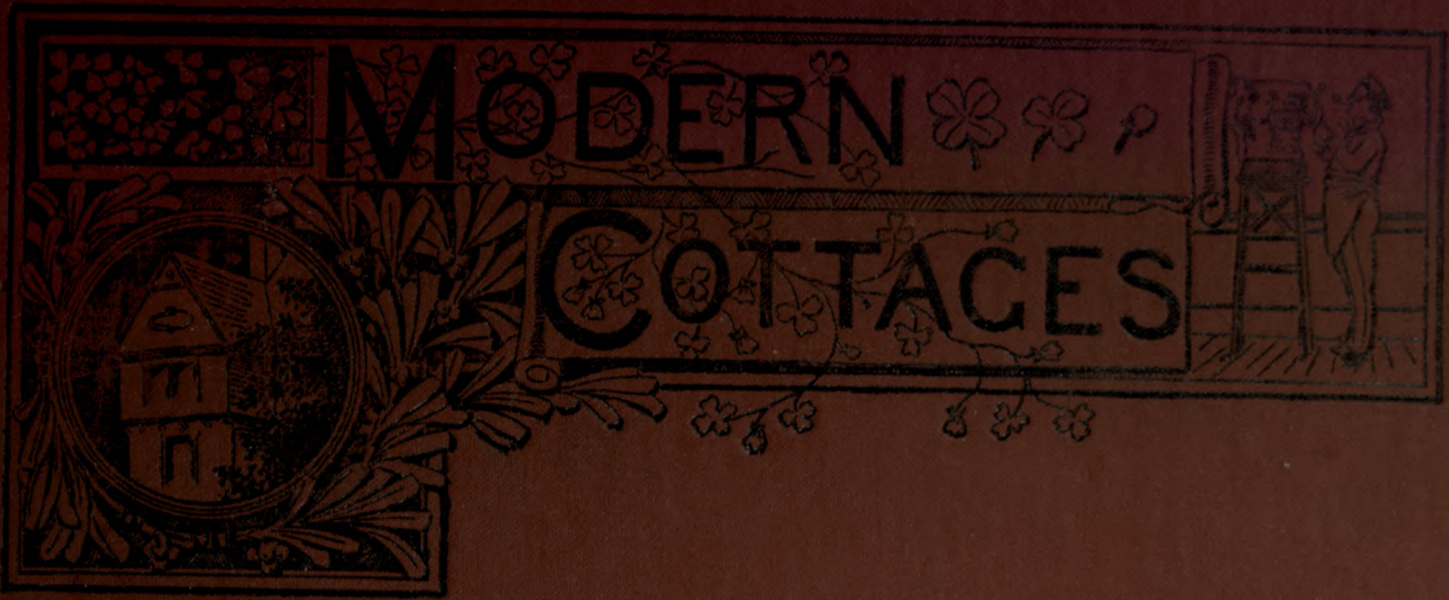
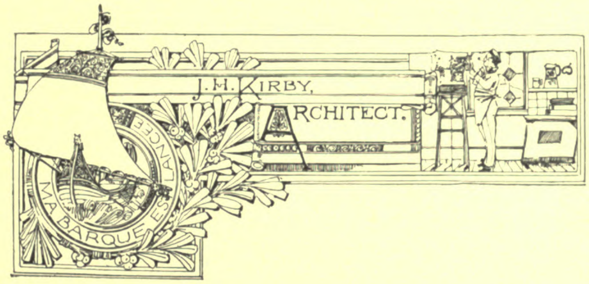


MODERN COTTAGES

By J.H. Kirby Archt.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School of Practical Science.
Toronto, Ont.

I AM INDEBTED TO MY BROTHER,
HENRY P. KIRBY,
OF ALLEGHENY CITY, PA., FOR THE MANY EXCELLENT INITIAL
CUTS AND FRAGMENTARY SKETCHES EXHIBITED
THROUGHOUT THIS WORK.

J. H. KIRBY.

Arch
K

University of Toronto Library

MODERN COTTAGES

CONTAINS

125 ILLUSTRATIONS

OF

COTTAGES, DWELLINGS

AND MISCELLANEOUS WORK

32 FULL PAGE ILLUSTRATIONS

OF

COTTAGES, DWELLINGS, &C

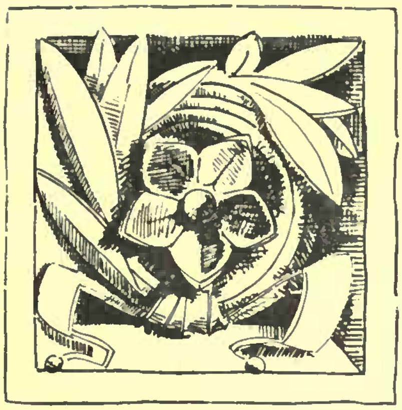
89823
10/8/08

BY

J. H. KIRBY, ARCHITECT

SYRACUSE, N. Y

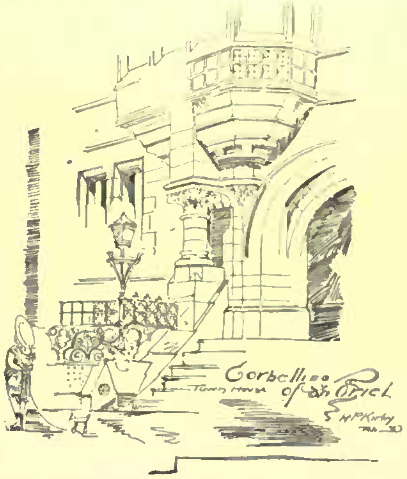
INTRODUCTION.



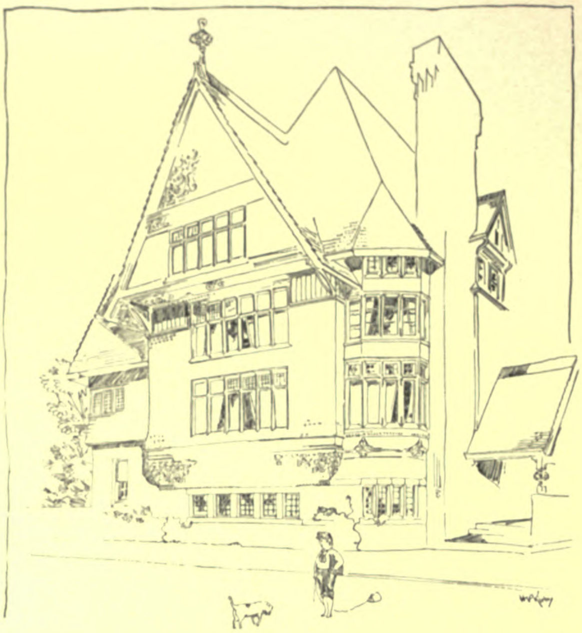
MODERN COTTAGES is the outgrowth, revision and enlargement of "PORTFOLIO OF COTTAGES." The illustrations are selections from work which, from time to time, has come up in our office practice. The subject matter is intended as suggestions to people interested in building; a sort of ground work or starting point, enabling them the more definitely to arrange and mature their general plans before placing the work in the hands of a professional architect. The employment of architects for the working up and developement of plans is now acknowledged by almost every one to be the most satisfactory way of doing business. It is better for the client, because he can see by an examination of the various scale drawings, working plans and specifications, just what he is going to get for a stated amount. It is also conceded by the builder to be the best way for him, as he is thereby better enabled to make close estimates and more clearly understand the points of construction set forth by the plans. It also relieves him from many of the points of calculation involved. In the employment of an architect, the client, or owner, should always give the architect his entire confidence, as this will invite confidence and co-operation in return. The client should state frankly the amount of money he is willing to expend in building and not mislead the architect by making him think that it must cost less; in other words, the client should not exact the architect to build a *four* thousand dollar house for *two* thousand.

The principal motive in this work is to give mostly moderate priced cottages, ranging from $1,000 to $10,000; one or two, however, touching as high as twenty or thirty thousand dollars.

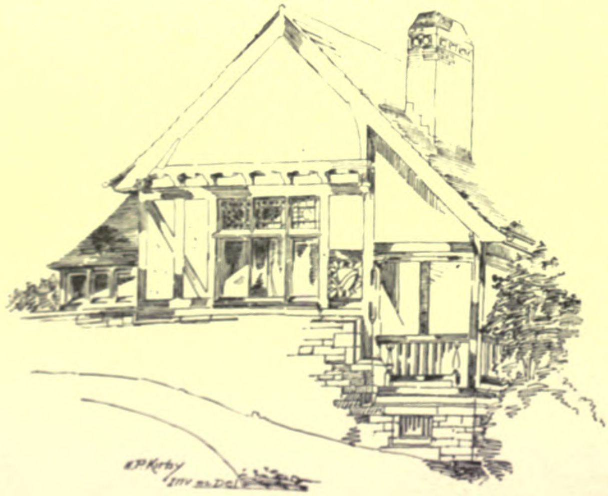
We realize that the architecture of the future will be more quiet and less florid than it has been for several years past; we have therefore endeavored so to treat the designs that they will always look well. We have also given careful study to the planning that we might so arrange them that they would be comfortable and convenient in every respect. We consider it better taste to avoid flimsy and trashy details in the construction of our homes; the



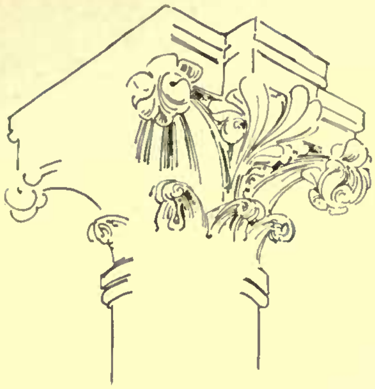
study should be more for repose and harmony and less for ostentatious display.



The cost given in connection with the various designs must necessarily be only approximate, as the *real* cost will depend upon many circumstances. First it will be necessary to know just what to estimate upon, and this will require the working plans and specifications complete, as these show just how expensive the work is to be made. Again, the house will cost more or less, according to the prices of materials and labor ruling in the location where it is to be built. In many publications of this character the estimates given in connection with the illustrations are much lower than the houses can be built for with decency and comfort, hence many are misled. In looking over the illustrations the question naturally arises, "How much would such a house cost?" It is to gratify this desire on the part of the questioner that we give the approximate estimates connected with the illustrations, subject, however, to the above conditions.

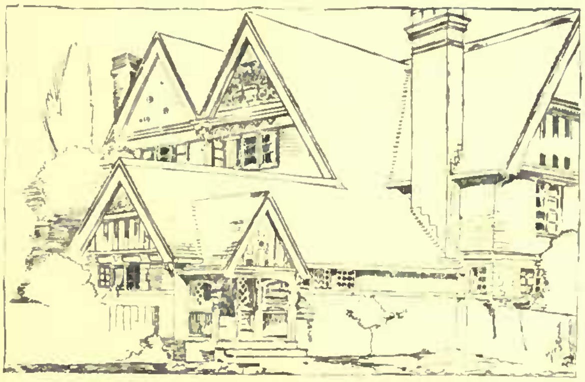


Many of the dwelling houses herein illustrated have been built from our plans, at a stated cost and under contract, and yet they might be built again and made to cost more, or less, according to circumstances. The style of the designs given is generally known as Queen Anne, a style which is calculated to meet the wants of people who desire good, comfortable homes and yet something pleasing to the eye. The picturesque roof is the principal feature in our cottage architecture and it is coming to be treated more simply than formerly. Many people raise the objection to the steep roof that it will easily get out of repair. We see no reason why a steep roof need get out of repair sooner than a flat one, providing it is properly constructed. In fact, on account of the frequent and heavy snows to which we are



subject in our northern climate in winter, it is better adapted to our needs and less liable to get out of order than the flat roof; nor is there any objection to it in any climate.

Where estimates are given in connection with plates, they are based upon the condition that everything is well done. There is one thing which should be insisted upon, even in very low priced cottages, and that is, that a good stone, brick, or cement cistern be provided, ample, commodious, well covered, ventilated, and placed within cellar wall. Connected with this directly or indirectly should be a good filter, the water from which should be used altogether for drinking and cooking purposes. It is better to get a little dirt from the roof than to use water polluted with the leachings from sewers and cesspools.



There is another thing which should be carefully considered in building. While many cheap houses are built upon cedar posts, still it is better, even in *very cheap* houses, to have a good, solid stone foundation wall and a good, dry cellar under the entire house. Although the cost of a stone foundation is greater than that of cedar posts, yet it will always be found to be cheaper in the end, as the sanitary conditions are so much better and the house is so much warmer that it saves fuel, doctor's bills, and frequent repairs. Still another point which should always be considered in planning a house, is the location of the cistern. It should *never* be placed under a bedroom or living room, but under the kitchen, as the dampness arising from the water, not only causes rheumatism and kindred ills, but also rots the floor.

In putting forth this work we do not claim that it is gotten up for missionary purposes, but expect, of course, that it will prove of some profit to us in a business way, but we trust our patrons will credit us with having endeavored to do good and conscientious work.

J. H. KIRBY, ARCHITECT.

Description of Full Page Illustrations.

DESIGN 1. Exterior.—Foundation, cedar posts set in concrete, terminate at grade. No cellar. Underpinning ceiled up with tongued, grooved and beaded boards, put on two thickness. The body of house is clapboarded and the gables shingled. The roof is also shingled. The entire exterior surface is covered with a good quality of building paper, underneath the clapboards.

Interior.—The house is intended to accommodate a small family entirely on the first floor, but two or three good rooms could be finished up in the attic if desired. All rooms and apartments plastered throughout. Kitchen and pantry wainscoted. Painted two coats outside and inside. The roof to be painted two good coats. Approximate cost about $800.

The above estimate does not include plumbing and heating apparatus.

DESIGN 2.—A cosy frame cottage. Exterior.—Foundation walls of stone. First story nine feet high. The entire exterior surface covered with good building paper. Body of house covered with clapboards. All roofs shingled.

Interior.—Contains five rooms, all finished and plastered throughout. Kitchen and pantry wainscoted. Painted two coats outside and inside. Approximate cost $1,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 3. Exterior.—Foundation walls of stone. Cellar under entire building. Stone cistern in cellar. Brick chimneys. Sixteen-feet posts. First story nine feet high. The entire frame covered with building paper. Body of house covered with clapboards. Gables paneled and shingled. All roofs shingled.

Interior.—Six rooms, all finished ; four bed-rooms. Sliding doors between living-room and parlor. Box staircase. Kitchen and pantry wainscoted. Painted two coats, exterior and interior. Roof painted two coats. Approximate cost about $1,400.

The above estimate does not include plumbing and heating apparatus.

DESIGN 4.—A small frame cottage. Exterior.—Foundation walls of stone. Cellar under entire house. Good stone cistern in cellar. Brick chimneys, start from cellar bottom. Eighteen-feet posts. First story nine feet high. Second story eight feet six inches. The entire frame sheathed with matched lumber and covered with building paper. Narrow clapboards for body work. Roofs shingled. Staircase window on brackets. Nice porch and balcony.

Interior.—Seven rooms and staircase hall, all finished throughout. Staircase window of stained glass. Sliding doors between parlor and living-room. Kitchen and pantry wainscoted. Wood-work throughout of pine, natural finish. The exterior and roof painted three good coats. Approximate cost $1,700.

The above estimate does not include plumbing and heating apparatus.

DESIGN 5.—A simple, frame cottage. EXTERIOR.—Foundation walls of stone. Cellar under entire house. Stone cistern in cellar. Posts eighteen feet. First story nine feet high; second story eight feet six inches. The entire exterior surface covered with matched boards and the same covered with good building paper. First story covered with clapboards. Second story and gables shingled.

INTERIOR.—Contains six rooms and hall, all finished throughout with white pine. All natural wood finish, no paint. Kitchen and pantry wainscoted. The entire exterior finished with an application of three good coats of creosote wood stains, including roof. Approximate cost $2,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 6. EXTERIOR.—Foundation walls of stone. Cellar under the entire house. Good cistern in cellar. Posts eighteen feet. Cellar six feet six inches high. First story nine feet high. Second story eight feet six inches high. A good attic. Approach attic through scuttle. The entire frame sheathed throughout and covered with building paper. The body of the building covered with clapboards. Porch gables shingled. Roofs shingled. House gables plastered with Portland cement.

INTERIOR.—Six rooms. Parlor and dining-room communicate by means of sliding doors. Kitchen wainscoted. Staircase wainscoted on sides with cherry. General finish throughout of pine, either painted or natural wood finish. The exterior wood and tin work painted two coats. Approximate cost $2,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 7. EXTERIOR.—Foundation walls of stone. Cellar under entire house. Stone cistern in cellar. Posts eighteen feet. Cellar six feet six inches high. First story nine feet high. Second story eight feet six inches high. The entire exterior frame covered with matched sheathing; also to be covered with building paper. Body clapboarded; gables and roofs shingled. The oriel staircase window and porch are attractive features.

INTERIOR.—Seven rooms. Parlor connected with living-room by sliding doors. Staircase of cherry; otherwise finished in pine. Wood-work natural finish. Staircase window to have stained glass. The exterior painted with three good coats. Roofs painted two coats mineral paint. Approximate cost $2,200.

The above estimate does not include plumbing and heating apparatus.

DESIGN 8.—A compact frame cottage. EXTERIOR.—Foundation walls of stone. Cellar under entire house. Stone cistern in cellar. Posts twenty feet high. Cellar six feet eight inches high. First story nine feet six inches high. Second story nine feet high. The exterior surface sheathed, papered and clapboarded. Roofs shingled. Gables shingled with cut shingles. The dormers, gables and porch form pleasing features.

INTERIOR.—Seven rooms and large staircase hall. Staircase of cherry or oak. Staircase window, stained glass. Wood-work, whitewood, natural finish, in imitation of cherry. Exterior painted three coats. Roof two coats mineral paint. Approximate cost $2,200.

The above estimate does not include plumbing and heating apparatus.

DESIGN 9.—A picturesque frame cottage. EXTERIOR.—Foundation wall of stone. Underpinning of brick. Cellar under the whole house. Stone cistern in cellar. Cellar six feet six inches high. Posts eighteen feet high. First story nine feet high. Second story eight feet eight inches high. Sheathed, papered and clapboarded. Roof shingled. Panels on end plastered with Portland cement.

INTERIOR.—Contains six rooms. Hall and box stairs finished throughout in pine or balm wood, natural wood finish. Kitchen wainscoted and has maple floor. The exterior painted three good coats. The roof painted two coats mineral paint. Approximate cost $2,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 10.—An effective frame cottage. EXTERIOR.—Foundation walls of stone. Cellar under whole house. Stone cistern in cellar. Posts twenty feet high. Cellar seven feet high. First story nine feet six inches. Second story nine feet. Exterior surface covered with sheathing, papered and clapboarded. Gables shingled. Roof shingled. Effective features, outside chimney of pressed brick and broad porch.

INTERIOR.—Eight rooms and staircase hall. Staircase of cherry. Sliding doors between hall and parlor. Arch between parlor and library. Back stairs. Kitchen wainscoted. Finished throughout in pine, natural wood finish. Fireplace in parlor. Three coats of paint outside. Roof painted two coats. Approximate cost $2,800.

The above estimate does not include plumbing and heating apparatus.

DESIGN 11.—An attractive frame cottage. EXTERIOR.—Foundation walls of stone. Cellar under whole house. A good stone cistern in cellar. Height of cellar seven feet. Posts eighteen feet. First story nine feet. Second story eight feet eight inches. Exterior frame-work covered with sheathing, paper and clapboards. Gables plastered with Portland cement. Roof shingled.

INTERIOR.—Seven rooms. Large hall with hard wood staircase. Dining-room and parlor connected by an arched opening for portieres. Corner fireplace in parlor. The interior finished in pine, natural wood finish. The exterior finished with three coats creosote stains. Roof painted red. Approximate cost $2,800.

The above estimate does not include plumbing and heating apparatus.

DESIGN 12.—A desirable, plain frame cottage. EXTERIOR.—Foundation walls of stone. Underpinning rock-face. Cellar under entire house. Stone cistern in cellar. Height of cellar seven feet. Posts twenty feet. First story nine feet six inches. Second story nine feet high. Exterior surface sheathed, papered and clapboarded. Roof shingled. Kitchen wainscoted and hard wood floor. Principal exterior features, porch, balconies, staircase window, etc. Staircase window to have cathedral glass.

INTERIOR.—Nine pleasantly located rooms, besides hall and staircase hall. Pleasant kitchen. Back stairs. Wood work finished with whitewood, natural wood finish in imitation of cherry. The exterior painted three good coats of lead and oil. Roof shingled and painted. Approximate cost $3,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 13.—A picturesque frame cottage. EXTERIOR.—Foundation walls of stone. Underpinning rock-face. Cellar under entire house. Cellar seven feet high. Posts twenty feet. First story nine feet six inches. Second story nine feet. Good attic. Exterior walls sheathed, papered and clapboarded. Gables shingled. Roof shingled. Principal exterior features, broad verandas, balcony and gables.

INTERIOR.—Contains eight finished rooms, hall and staircase. Staircase of hard wood for rails, newels and balusters. Back stairs, pantry and kitchen wainscoted, and hard wood floor in kitchen. All finished throughout with white pine, in natural wood finish. The library, parlor and living-rooms connected by sliding doors. Fireplace and mantel in living-room of cherry. Exterior painted three coats for body of house and three coats creosote stains in gables. Roof painted. Approximate cost $3,500.

The above estimate does not include plumbing and heating apparatus.

DESIGN 14.—A compact cottage. EXTERIOR.—Foundation walls of stone. Cellar under whole house. Height of cellar seven feet. Posts twenty feet. First story nine feet six inches. Second story nine feet. Exterior frame work sheathed, papered and clapboarded. Gables shingled. Roof shingled. The exterior effect is unique and well broken.

INTERIOR.—Contains eight rooms, besides hall and bath-room and closets. Kitchen is wainscoted and has hard wood floor. No back stairs. Dining-room, parlor and hall connected by sliding doors. Fireplace in parlor. Den, or study, at right of hall. Newels, rail and balusters of staircase finished in cherry. Mantel of cherry. General finish throughout, pine or whitewood, natural wood finish. The exterior painted three good coats. Roof painted. Approximate cost $3,300.

The above estimate does not include plumbing and heating apparatus.

DESIGN 15. EXTERIOR.—Foundation walls of stone. Stone cistern in cellar. Cellar seven feet high. Posts twenty-two feet. First story nine feet eight inches.

Second story nine feet two inches. A commodious attic. The exterior frame covered with sheathing, building paper and narrow clapboards. The principal exterior features and attractions are the broad verandas, balconies and gables. The roof is shingled.

INTERIOR.—Hall, parlor and living-room communicate by means of sliding doors. Back stairs lead out of kitchen. The kitchen has a hard wood floor, and is wainscoted. Mantel has fireplace in living-room. Staircase finished with hard wood for newel, rail and balusters. Finish throughout with yellow pine in natural finish. Exterior painted three coats. Roof two coats. Approximate cost $3,700.

The above estimate does not include plumbing and heating apparatus.

DESIGN 16. EXTERIOR.—Foundations of stone. Underpinning of pressed brick. Cellar under the entire house. Stone cistern in cellar. Height of cellar seven feet. Posts twenty-two feet long. First story nine feet eight inches high. Second story nine feet four inches high. Attic unfinished. Exterior frame sheathed and papered with building paper. First story clapboarded; second story and gables shingled. Roof shingled. Principal features, outside pressed brick chimney, porches, balcony, gables, etc.

INTERIOR.—A very compact interior containing eight rooms, beside hall, bath-room and closets. The library, living-room, parlor and hall communicate by means of sliding doors. The principal staircase has a landing and cathedral glass window. The kitchen and back stairs are wainscoted, and the kitchen has a hard wood floor. The entire interior is finished in white pine, except the stairway and mantel. The parlor has a fireplace and an oriel bay window. The first story of the exterior is painted three coats, and the second story three coats of creosote stains. Roof painted. Approximate cost $3,500.

The above estimate does not include plumbing and heating apparatus.

DESIGN 17.—A moderate priced frame cottage. EXTERIOR.—Foundation walls of stone. Cellar under the entire house. Good cistern in cellar. Height of cellar seven feet. Posts eighteen feet. First story nine feet high. Second story eight feet high. Exterior surface sheathed, papered with building paper and clapboarded. Gables shingled. Roofs shingled.

INTERIOR.—Contains seven rooms, hall, closets and bath-room. The interior is finished throughout in pine and painted three coats. The kitchen connects with second floor by back stairs. The living-room has a fireplace. Sliding doors connect hall, parlor and living-room. Front stairs all cherry except body. The exterior is painted three coats. The roof is painted two coats mineral paint. Approximate cost $3,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 18. EXTERIOR.—Foundation walls of stone. Underpinning rock-face.

Cellar under entire house. Cistern in cellar. Exterior frame sheathed, papered and clapboarded. Posts twenty-two feet long. First story nine feet six inches. Second story nine feet. Gables shingled and paneled. Principal exterior features, broad verandas, oriel window, staircase window, gables and pressed brick chimneys.

INTERIOR.—Contains ten rooms, besides hall, bath-room and closets. The principal rooms on first floor are so arranged that they can be thrown together by means of sliding doors. The front staircase is of hard wood, has a landing and cathedral glass window. The living-room has a fireplace and hard wood mantel. The kitchen is fitted up appropriately, and the entire interior is finished in yellow pine. The exterior is painted three good coats. The roof painted two coats mineral paint. Approximate cost $3,500.

The above estimate does not include plumbing and heating apparatus.

DESIGN 19. EXTERIOR.—Foundation walls of stone. Underpinning rock-face. Cellar under entire house. Posts twenty feet. First story nine feet six inches. Second story nine feet. Cellar seven feet high. The exterior frame is sheathed, papered and clapboarded. Gables and roof shingled. Prominent features, triplet windows, staircase oriel window, porch and gables.

INTERIOR.—Has nine rooms, arranged in the most compact manner. The hall and staircase are pleasing and attractive features. The house is finished in pine, natural finish throughout. The exterior is painted with three coats. The roof two coats. Approximate cost $3,600.

The above estimate does not include plumbing and heating apparatus.

DESIGN 20. EXTERIOR.—Foundation walls of stone. Underpinning rock-face. Cellar under entire building. Cistern in cellar. Cellar seven feet high. Posts twenty-two feet. First story nine feet eight inches high. Second story nine feet four inches high. Exterior frame sheathed, papered and clapboarded. Gables shingled. Roof shingled. Principal features, pleasant bays, broad porches and gables.

INTERIOR.—By reference to the floor plans it will be seen that all of the rooms are large and pleasantly located. The dining-room and kitchen have hard wood floors. The front stairs are of hard wood and the hall is large and commodious. The general finish is of white pine, natural finish. The exterior is painted three coats. Roof two coats. Approximate cost $4,200.

The above estimate does not include plumbing and heating apparatus.

DESIGN 21. EXTERIOR.—Foundation walls of stone. Cellar under entire house. Cistern in cellar. Cellar seven feet high. Posts twenty-two feet. First story nine feet eight inches. Second story nine feet four inches. Exterior frame covered with sheathing boards, building paper and clapboards. The broad verandas, outside pressed brick chimneys and oriel window are effective features.

Interior.—Contains large hall, and the parlor, living-room and dining-room each have fireplaces. The dining-room and kitchen each have hard wood floors. The hall is finished throughout in cherry, and the remainder in yellow pine. The exterior is painted three good coats. Approximate cost $5,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 22. **Exterior.**—Foundation walls of stone. Cellar under entire building. Cistern in cellar. Cellar seven feet six inches high. Posts twenty-four feet. First story ten feet. Second story nine feet six inches. Exterior frame covered with sheathing boards, building paper and narrow clapboards. Gables shingled. The attractive features are the broad porches, large bay and handsome staircase window of cathedral glass.

Interior.—By referring to the principal floor plans it will be seen that all of the living-rooms communicate with the hall, which is centrally located. The hall has a beautiful staircase and is finished in hard wood. The entire arrangement of rooms is so planned as to obtain the greatest amount of comfort and convenience. The general finish is white pine, natural wood finish. The exterior is painted three good coats. The roof two coats. Approximate cost $7,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 23.—A brick dwelling for a physician. **Exterior.**—Foundation walls of stone. Cellar under the entire building. Cistern in cellar. Cellar eight feet high. The walls are of pressed brick with terra cotta belting courses, etc.

Interior.—The large hall extending entirely through the centre of the house is a desirable feature in this dwelling house, as all the living-rooms communicate with it, while the physician's apartments are separated by it from the rest of the house. All the appointments are elegant. Considerable hard wood is used throughout. A careful study of the plans will give information in regard to arrangement and number of rooms. Approximate cost $9,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 24.—A large frame dwelling. This house has large and elegantly appointed rooms. The spacious verandas, the fine *porte cochere*, balconies, dormer windows, etc., are effective accessories. This house is well adapted to the climate of the south, or the sea shore. If the interior were finished for the most part in hard wood, the probable cost would be about $10,000.

The above estimate does not include plumbing and heating apparatus.

DESIGN 25.—A brick and frame dwelling. The lower part of this design is built of pressed brick and the second story of frame work, shingled. The interior is spacious and complete. A careful study of the plans will develop all of the good points.

The cost of such a house is somewhat problematical, but it would probably be about $15,000.

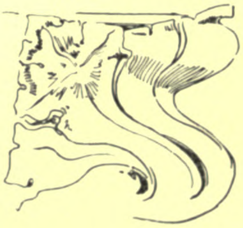
The above estimate does not include plumbing and heating apparatus.

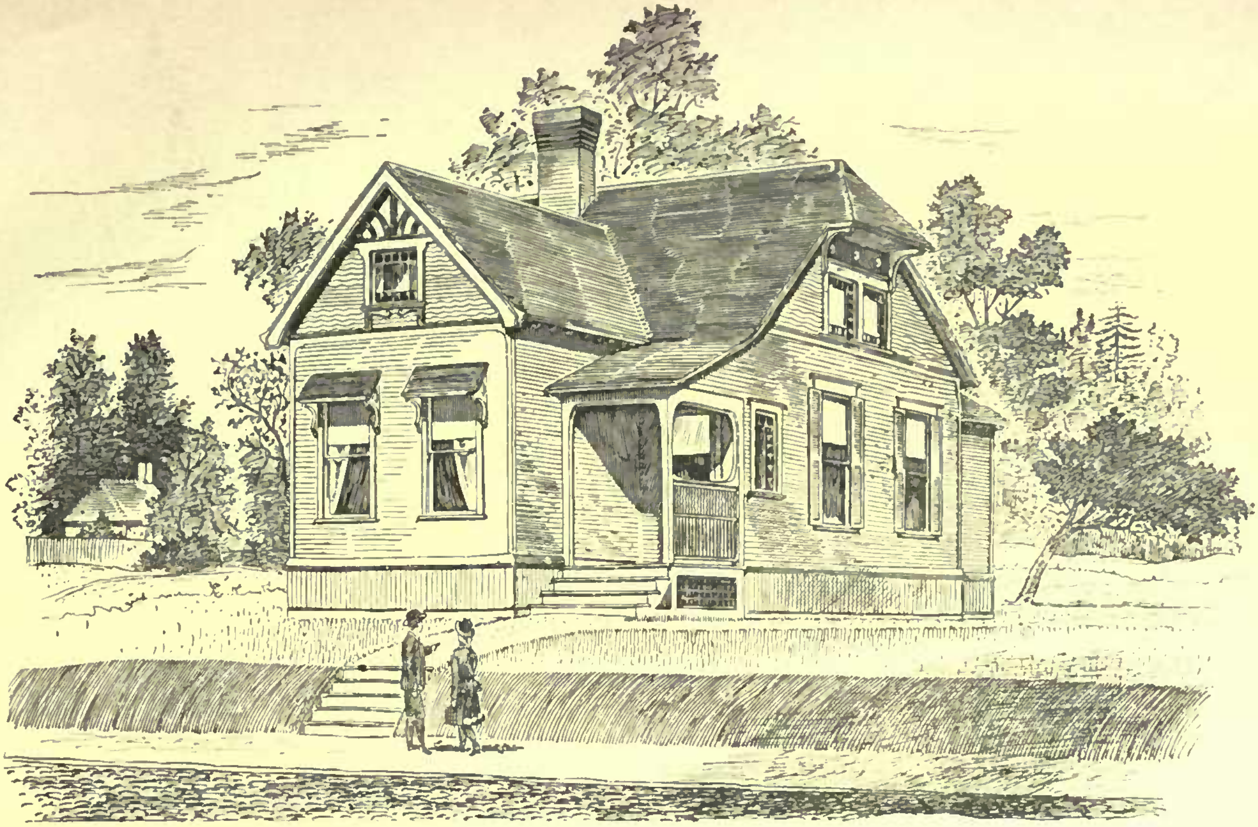
DESIGN 26.—A brick block of three houses. The fronts are built of Trenton pressed brick and brown stone. A study of the plans on Plate 28 will develop the information that they are compactly arranged, having a cross staircase hall communicating with the parlor. The stairs are finished in cherry, and the remainder of the house is finished in white pine. The parlors have a nice fireplace. The cost of the block is about $4,000 for each house.

The above estimate does not include plumbing and heating apparatus.

DESIGN 27.—A brick block of seven houses. These houses are built of Syracuse National pressed brick, terra cotta and limestone trimmings. Each house has a frontage of eighteen feet. A cross hall communicates with the back parlor, behind which are the dining-room and kitchen. There are ten rooms in all; two rooms in the third story. Each house is fitted up with bath-room, water closet, etc. See Plate 27. The cost of these houses is about $4,500 each.

The above estimate does not include plumbing and heating apparatus.





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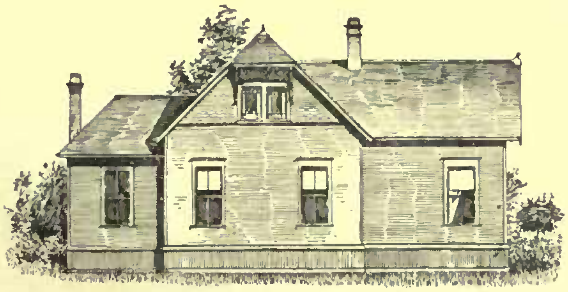
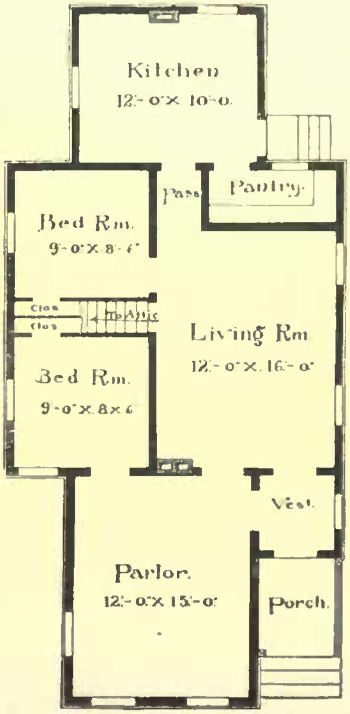
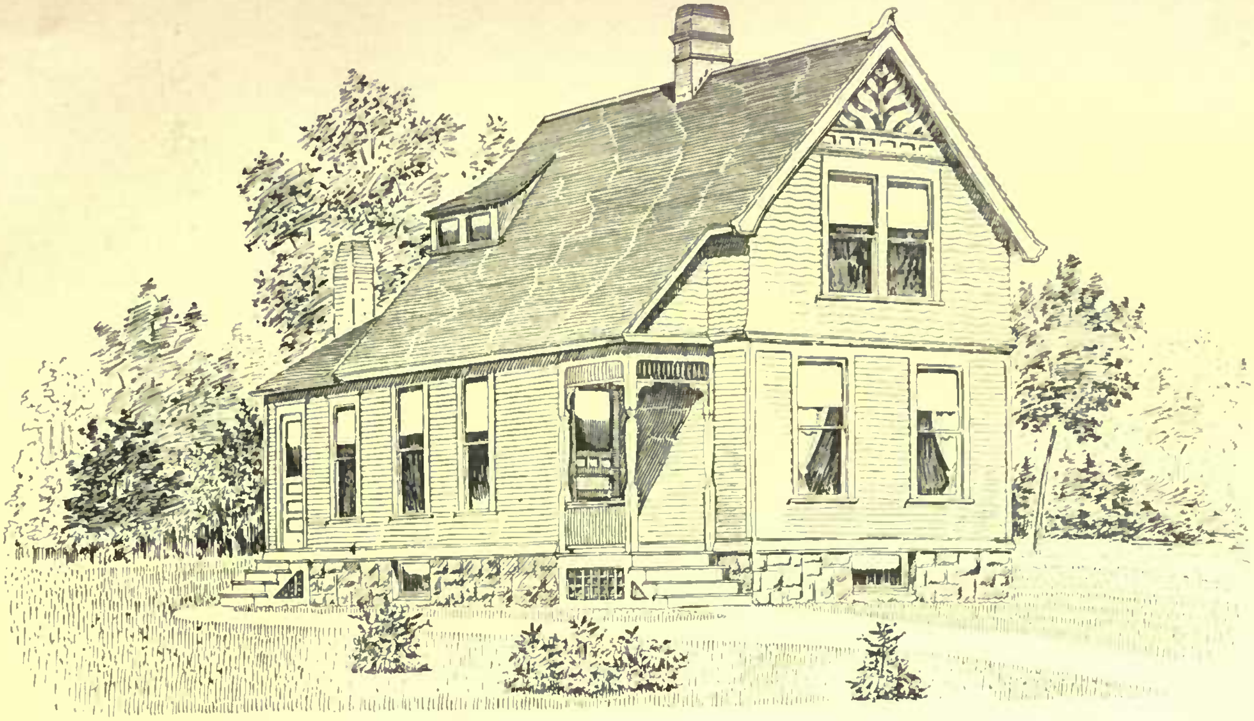


SIDE ELEVATION.


Kitchen
12'-0"× 10'-0.
Pass
Pantry.
Bed Rm.
9-0"× 8-6"
Clos
Clos
To Attic
Living Rm
12'-0"× 16'-0"
Bed Rm.
9-0"× 8×6
Vest.
Parlor.
12'-0"× 15'-0"
Porch.

FIRST FLOOR PLAN.



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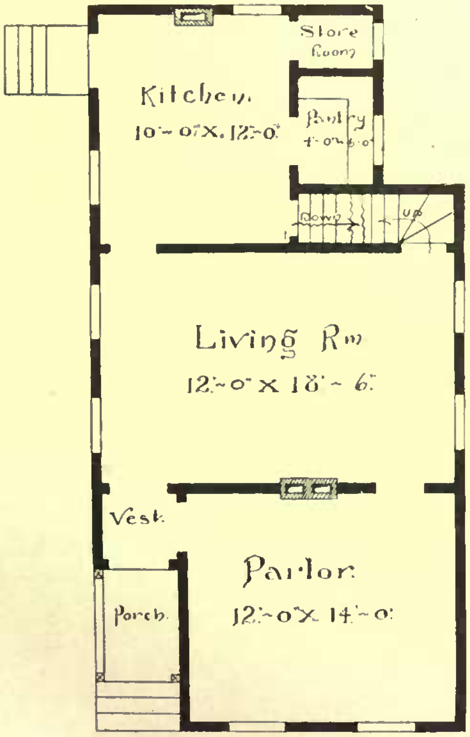
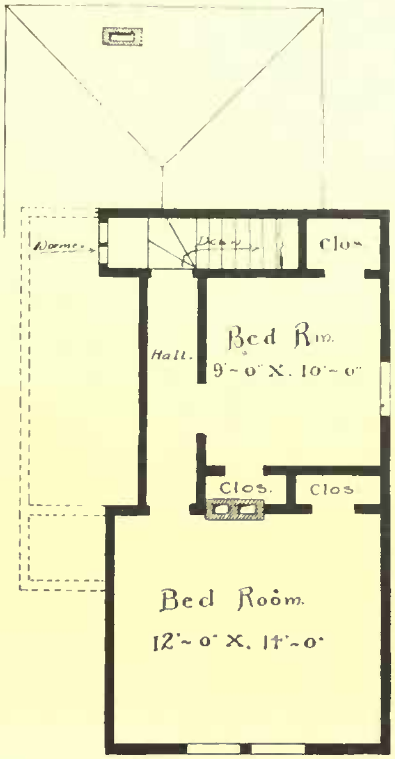
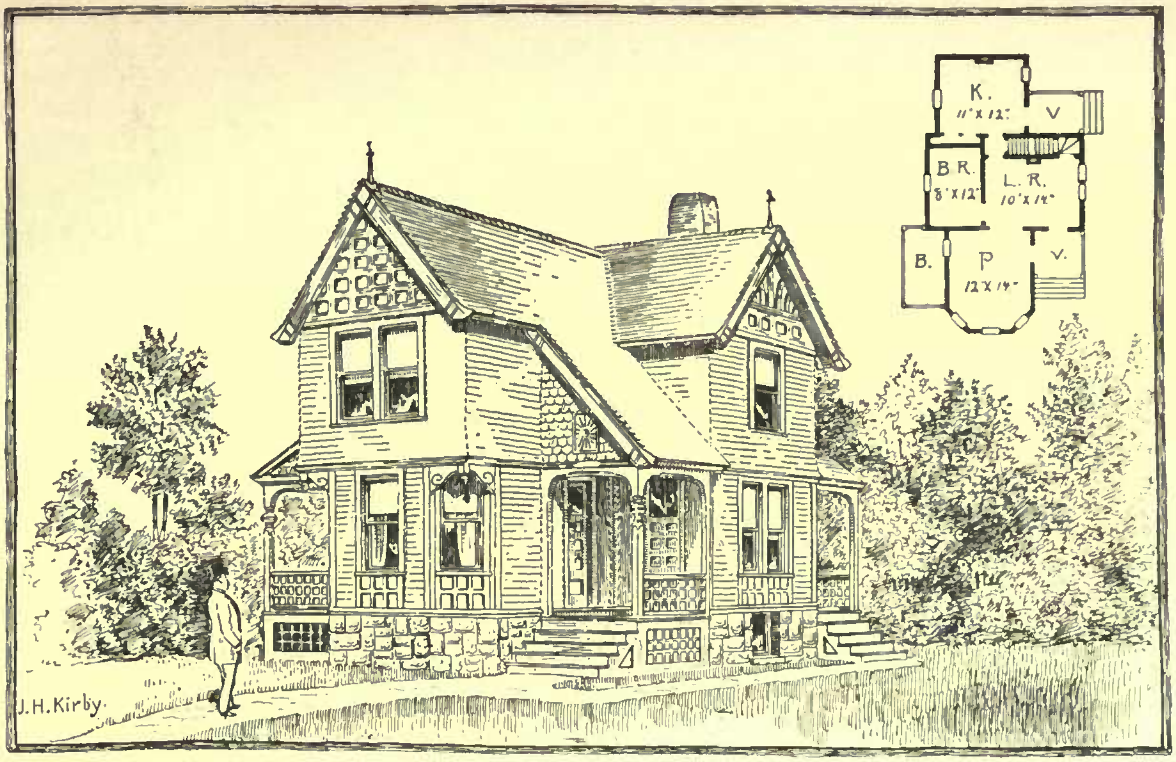

Store Room
Kitchen
10'-0"X. 12'-0"
Pantry
4'-0"x 6'-0"
Down
Up
Living Rm
12'-0" X 18'-6"
Vest.
Porch.
Parlor
12'-0"X 14'-0"

FIRST FLOOR PLAN.

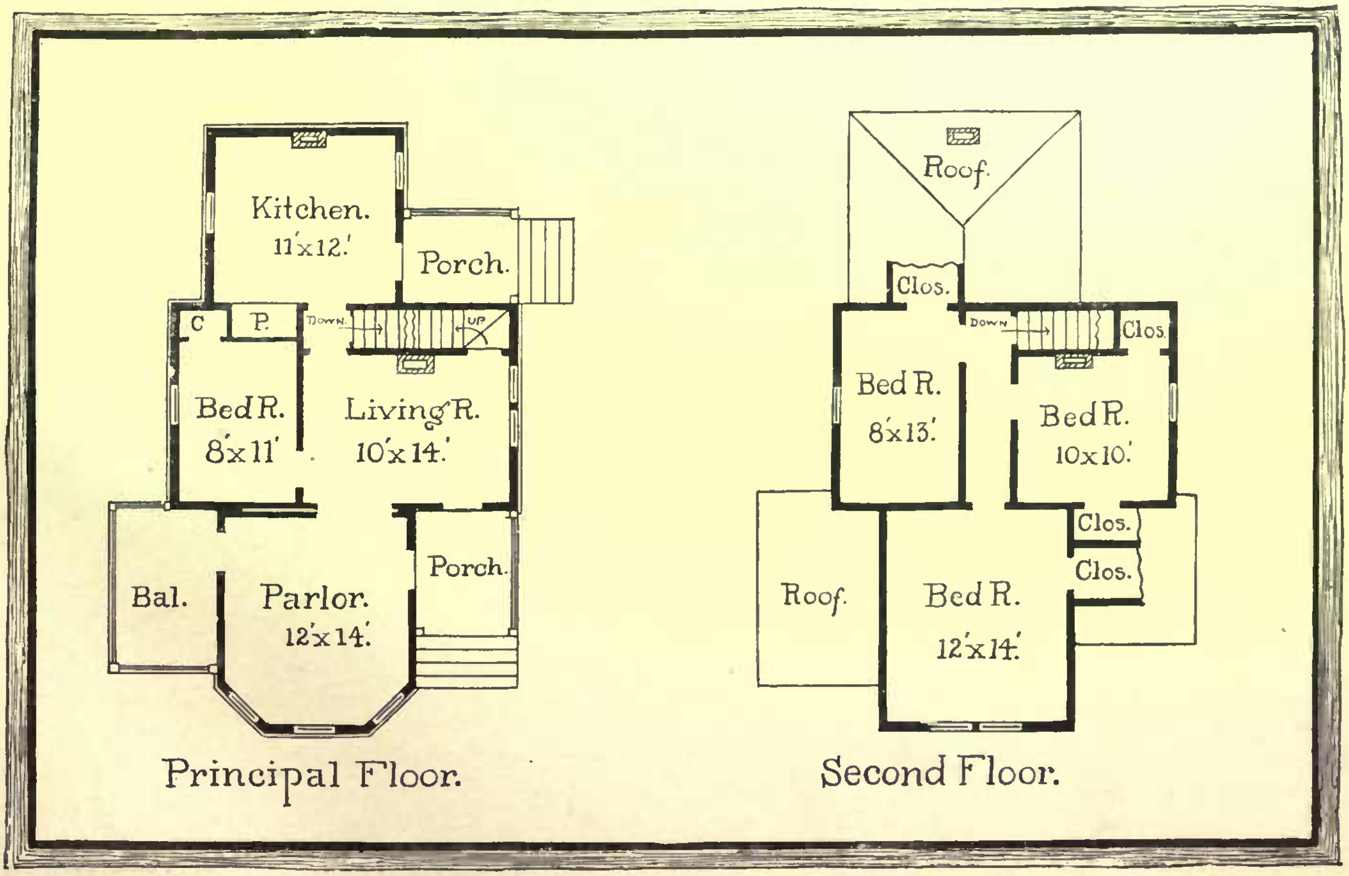

Dormer
Down
Clos.
Hall.
Bed Rm.
9'-0" X. 10'-0"
Clos.
Clos
Bed Room
12'-0" X. 14'-0"

SECOND FLOOR PLAN.

PLATE III. DESIGN 3.

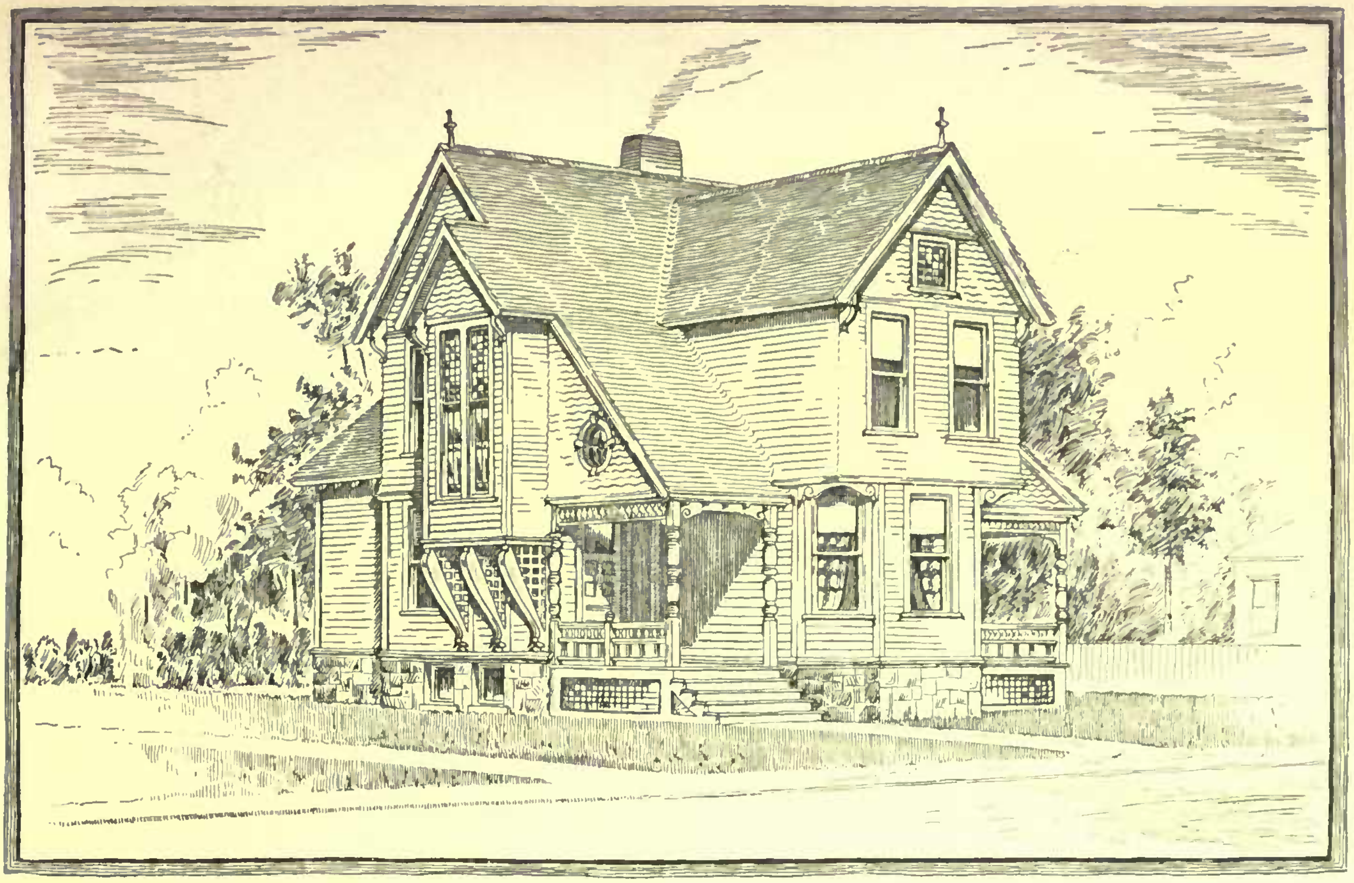

K.
11'x12'
V
B R.
8'x12'
L. R.
10'x14'
B.
P
12x14
V.
J. H. Kirby.

VIEW.

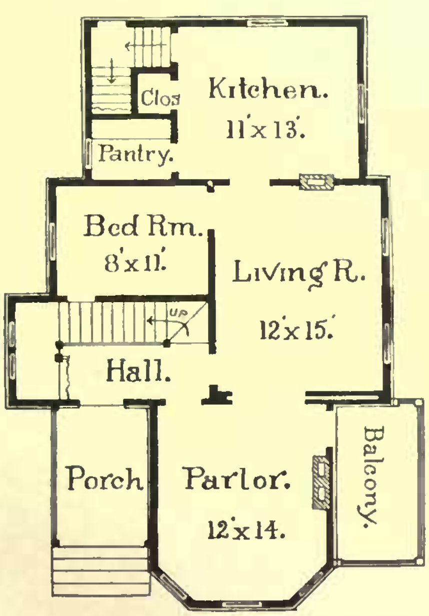

Kitchen.
11'x12'
Porch.
C
P.
DOWN
UP
Bed R.
8'x11'
Living R.
10'x14'
Bal.
Parlor.
12'x14'
Porch.
Roof.
Clos.
DOWN
Clos.
Bed R.
8'x13'
Bed R.
10x10'
Clos.
Clos.
Roof.
Bed R.
12'x14'

Principal Floor.

Second Floor.

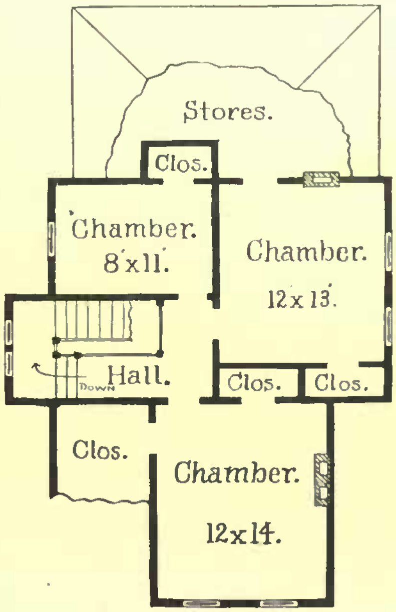


VIEW.



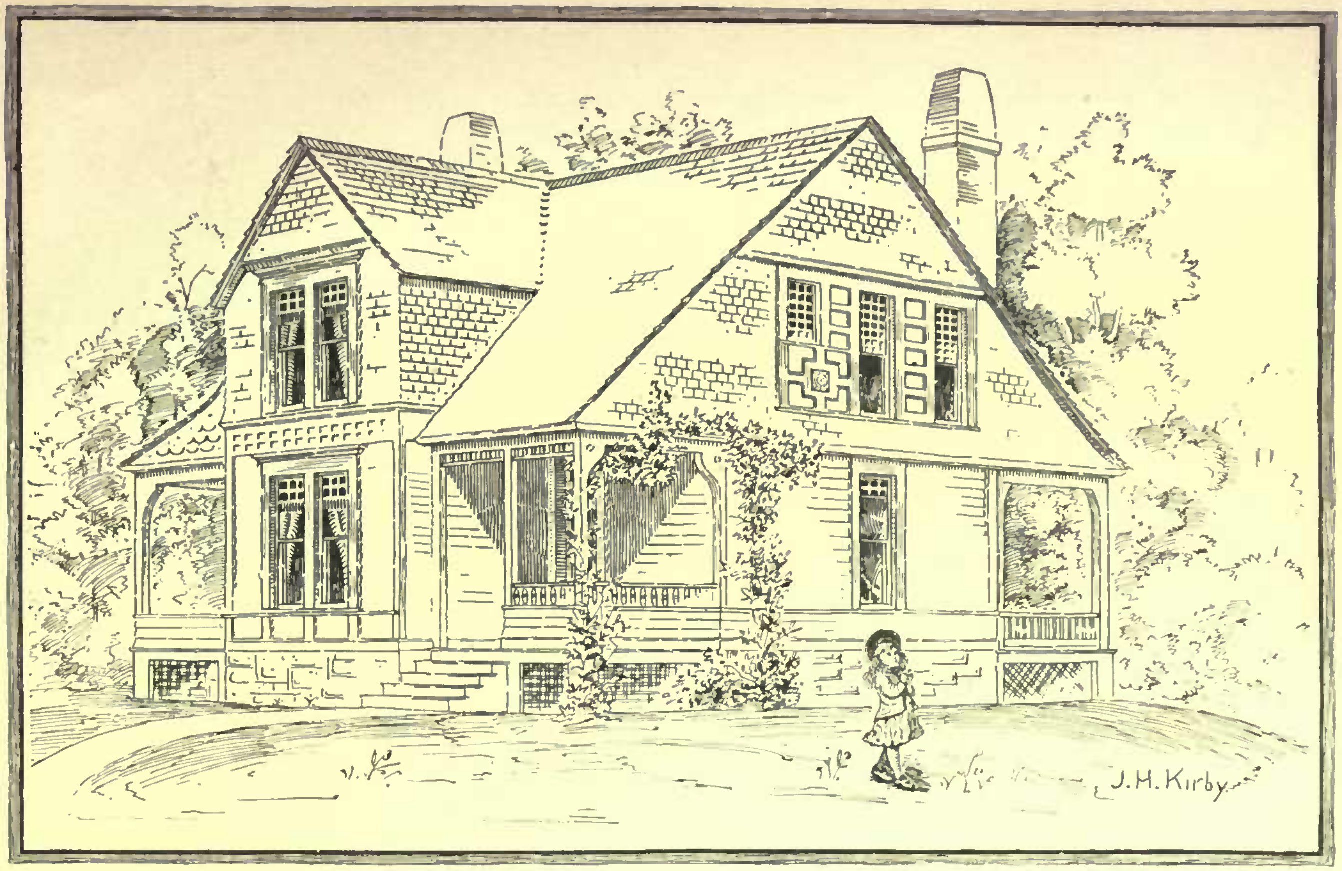
First Floor Plan.

Clos
Kitchen.
11'x13'.
Pantry.
Bed Rm.
8'x11'.
Living R.
12'x15'.
UP
Hall.
Porch
Parlor.
12'x14.
Balcony.

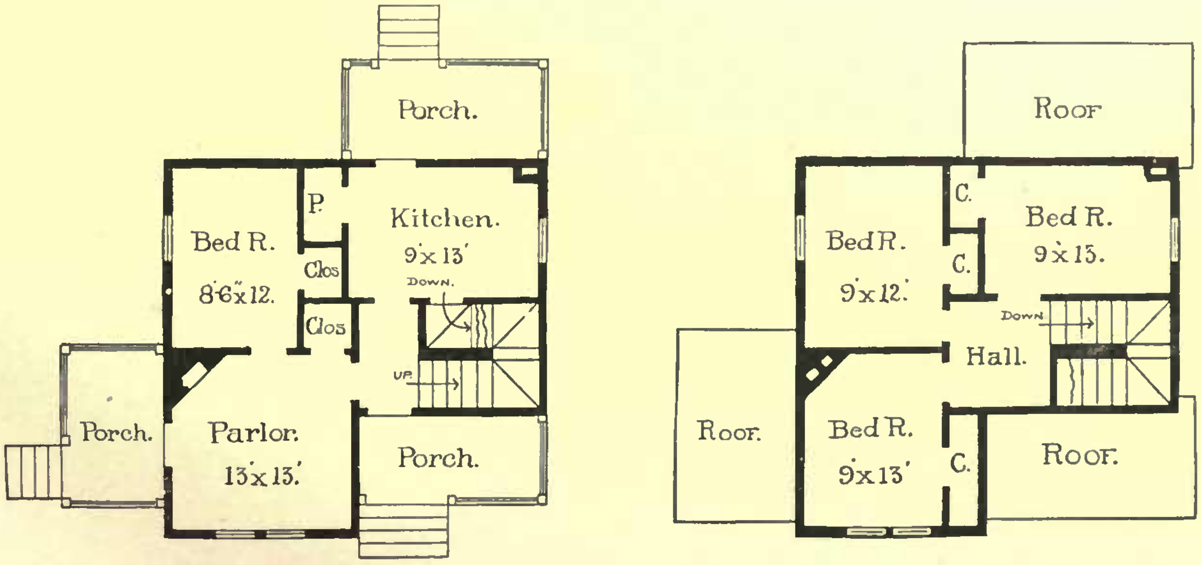


Second Floor Plan.

Stores.
Clos.
Chamber.
8'x11'.
Chamber.
12x13'.
DOWN
Hall.
Clos.
Clos.
Clos.
Chamber.
12x14.



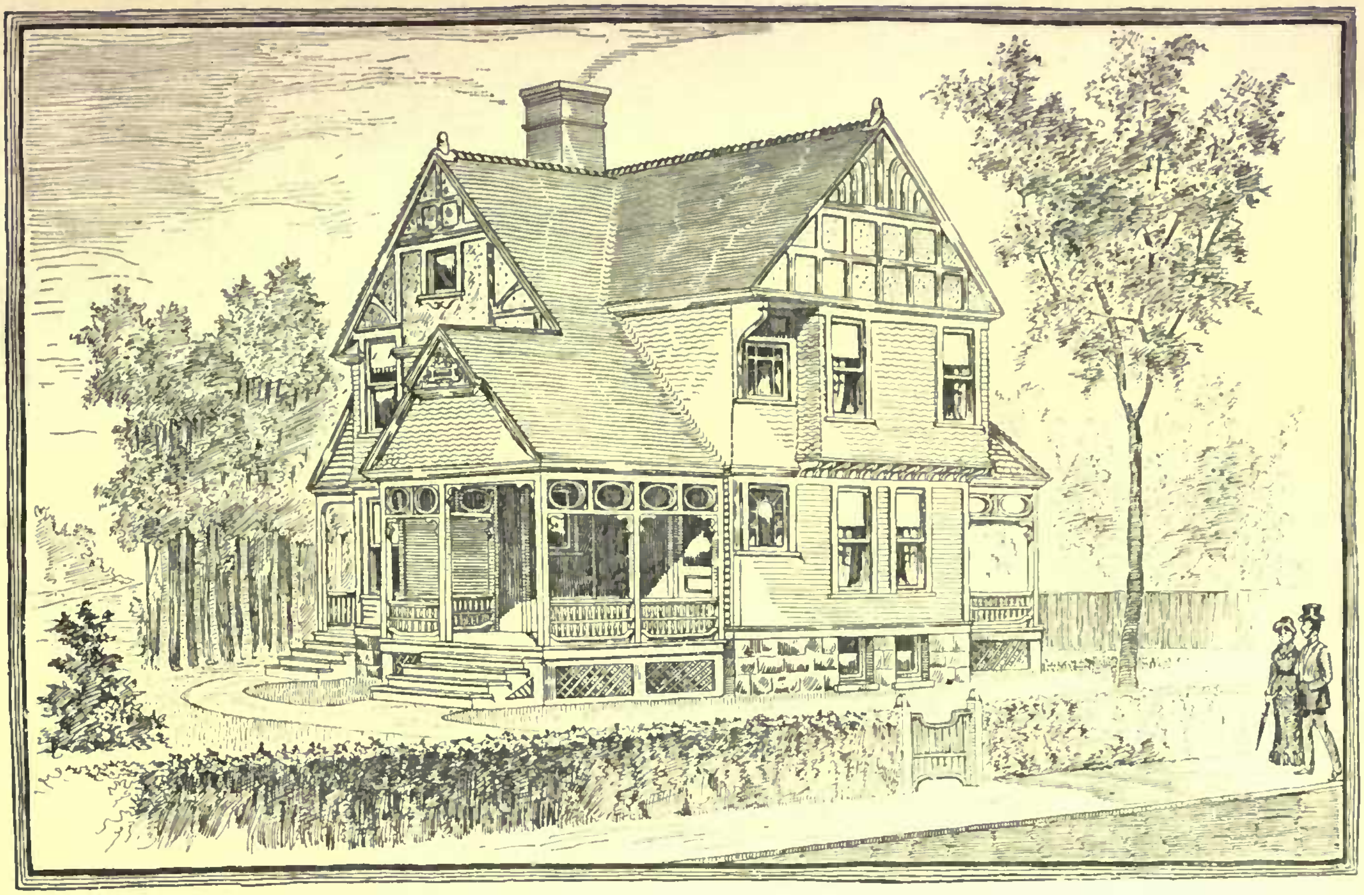
VIEW.


Porch.
P.
Kitchen.
9'x 13'
Bed R.
8'6"x 12.
Clos
Clos
DOWN.
UP.
Porch.
Parlor.
13'x 13.'
Porch.
Roof
C.
Bed R.
9'x 13.
Bed R.
9'x 12.'
C.
DOWN
Hall.
Roof.
Bed R.
9'x 13'
C.
Roof.

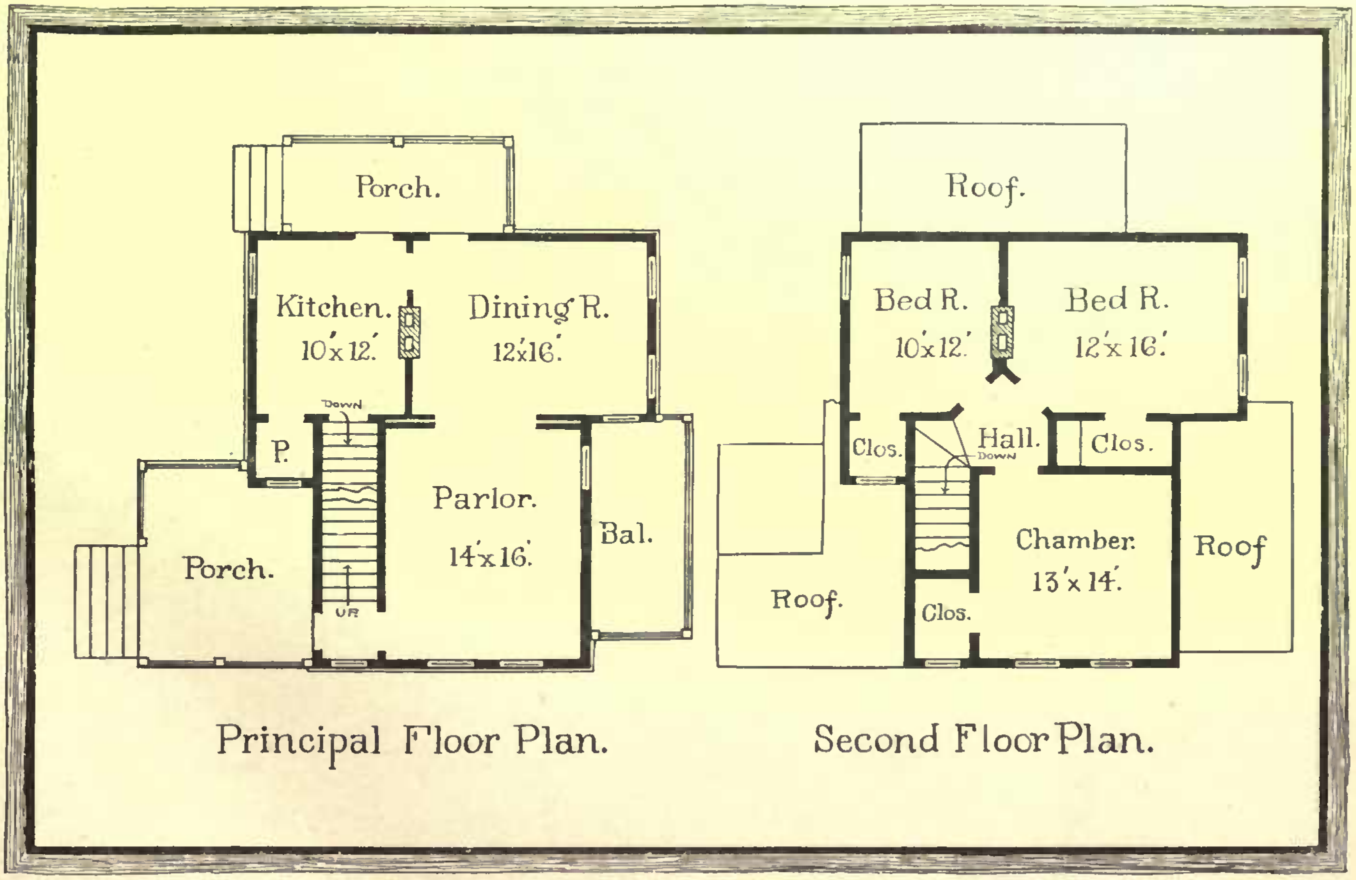
Principal Floor Plan.

Second Floor Plan.

PLATE VI. DESIGN 6.

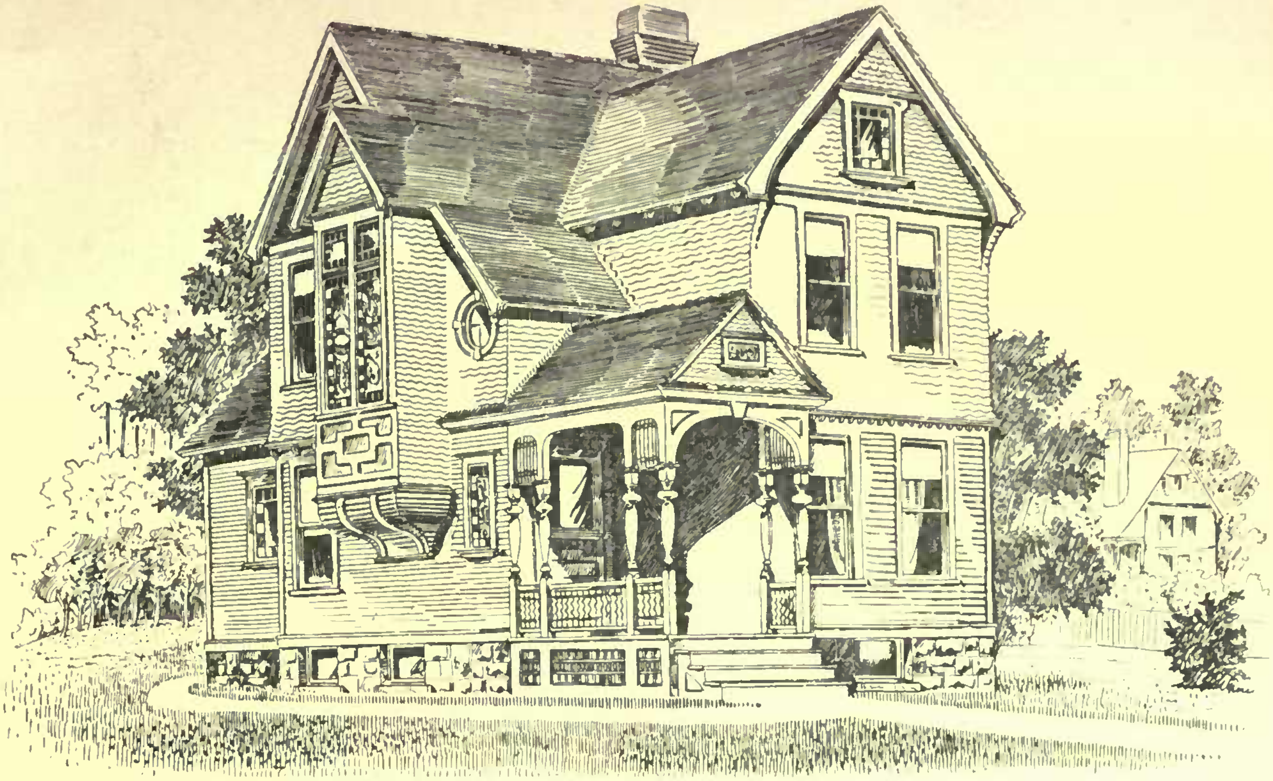


VIEW.

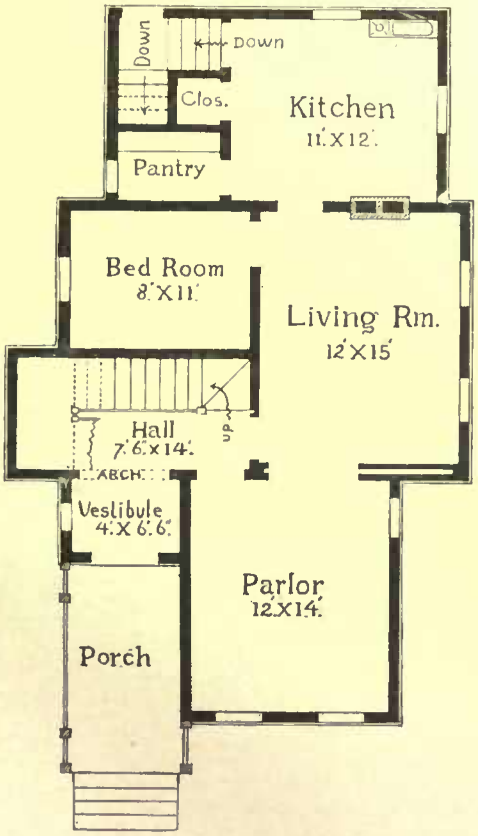

Porch.
Kitchen.
10'x 12'.
Dining R.
12'x16'.
Down
P.
Parlor.
14'x 16'.
Bal.
Porch.
Up
Roof.
Bed R.
10'x 12'.
Bed R.
12'x 16'.
Clos.
Hall.
Down
Clos.
Chamber.
13'x 14'.
Roof
Roof.
Clos.

Principal Floor Plan.

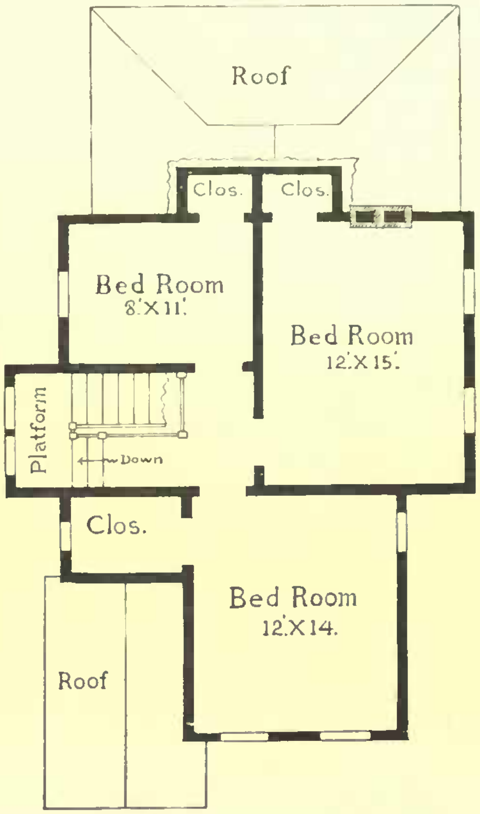
Second Floor Plan.



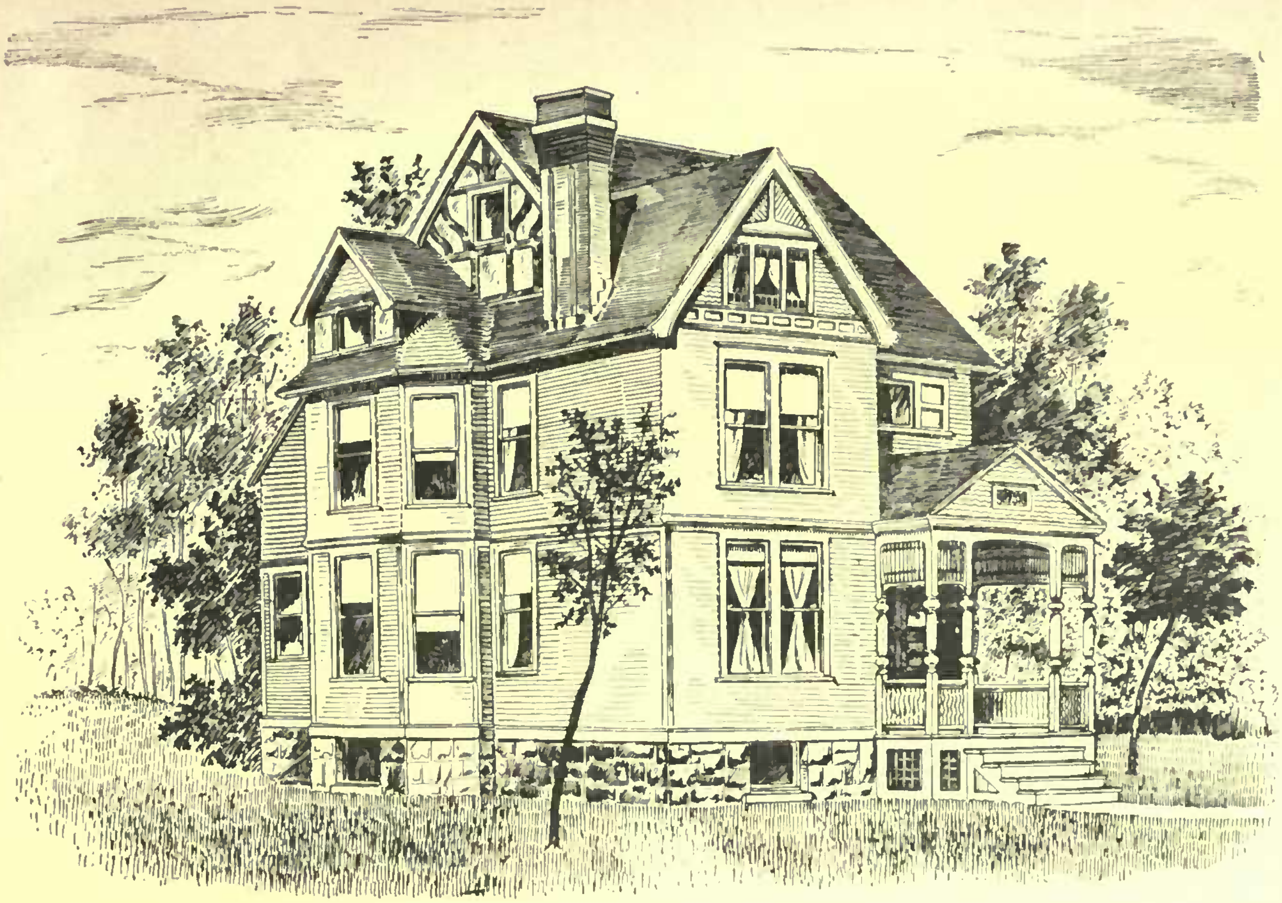
VIEW.


Down
Down
Clos.
Kitchen
11'X12'
Pantry
Bed Room
8'X11'
Living Rm.
12'X15'
Hall
7'6"x14'
Up
ARCH
Vestibule
4'X 6'6"
Parlor
12'X14'
Porch

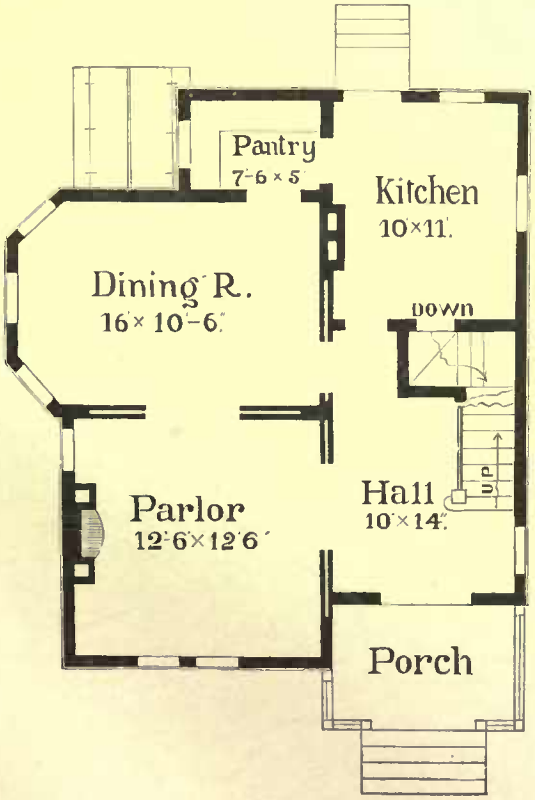
FIRST FLOOR PLAN.


Roof
Clos.
Clos.
Bed Room
8'X11'
Bed Room
12'X15'
Platform
Down
Clos.
Bed Room
12'X14.
Roof

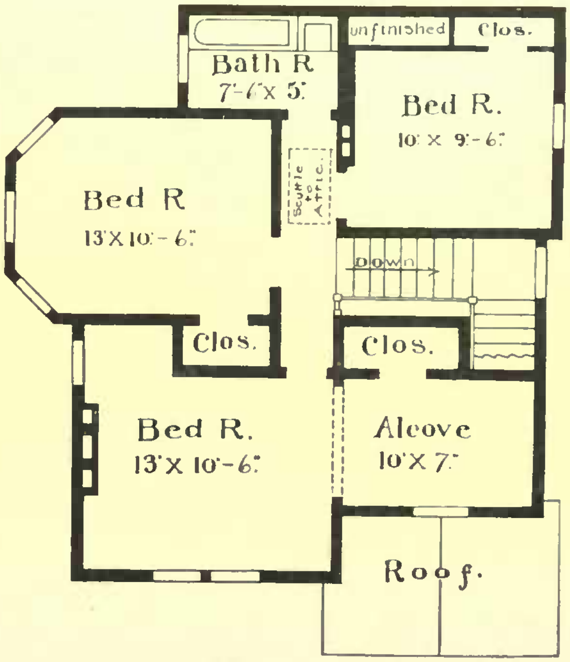
SECOND FLOOR PLAN.



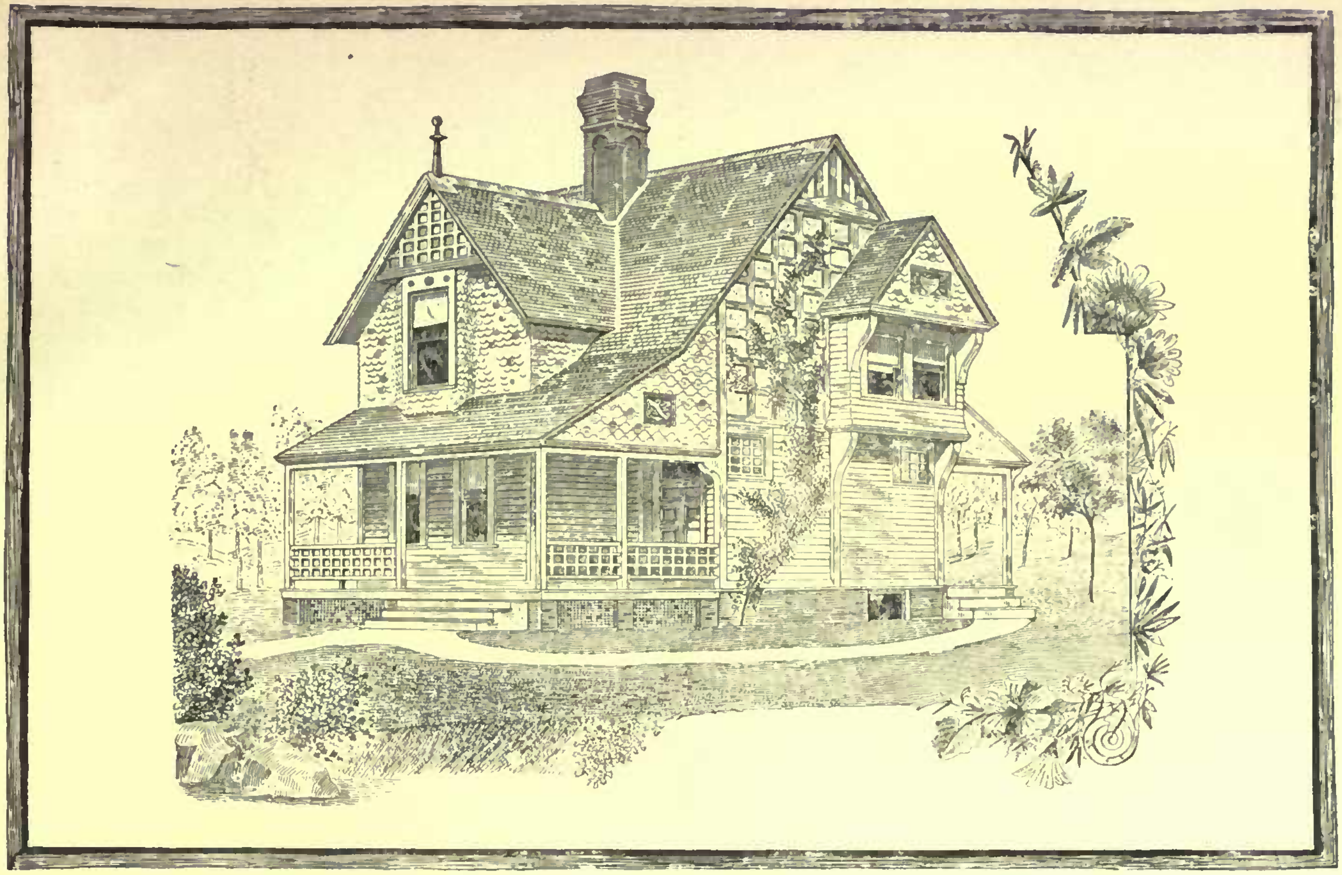
VIEW.


Pantry
7'-6 × 5'
Kitchen
10×11'
Dining R.
16× 10'-6"
DOWN
Parlor
12'6×12'6'
Hall
10×14'
UP
Porch

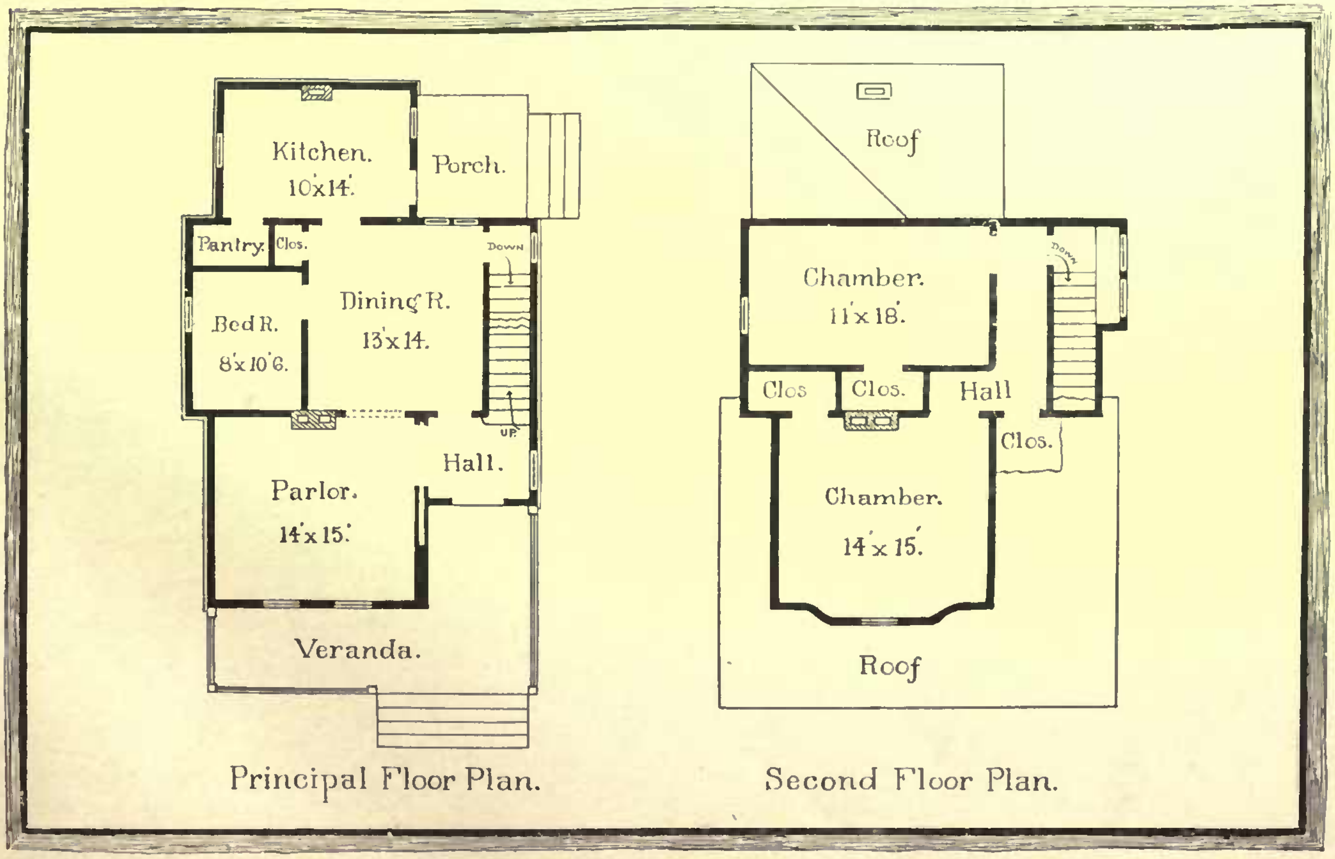
FIRST FLOOR PLAN.


unfinished
Clos.
Bath R
7'-6"x 5'
Bed R.
10'x 9'-6"
Bed R
13'X10'-6"
Scuttle to Attic
Down
Clos.
Clos.
Bed R.
13'X 10'-6"
Alcove
10'X 7'
Roof.

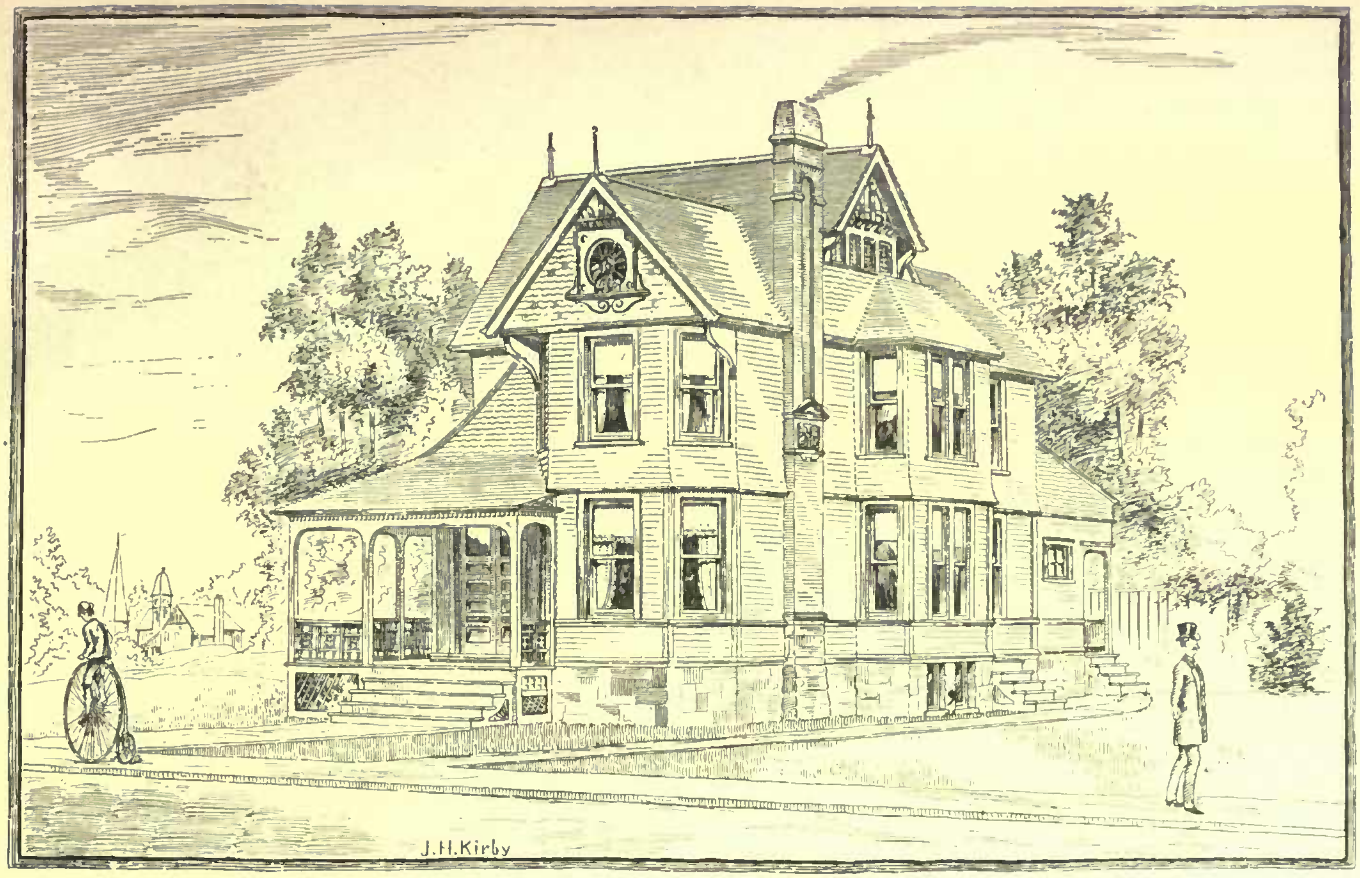
SECOND FLOOR PLAN.



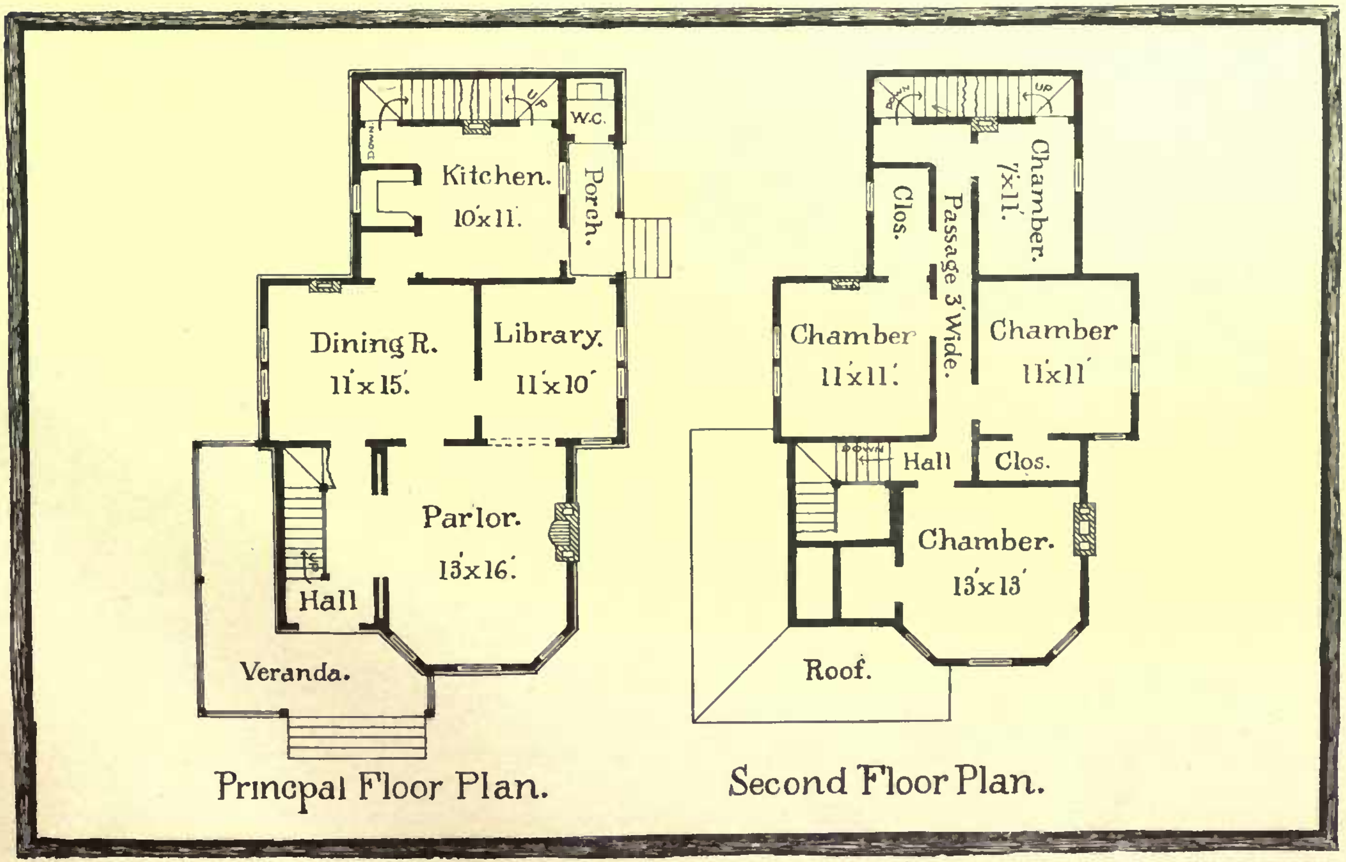
VIEW.


Kitchen.
10'x14'.
Porch.
Pantry.
Clos.
DOWN
Dining R.
13'x14.
Bed R.
8'x10'6.
UP
Hall.
Parlor.
14'x15'.
Veranda.
Roof
Chamber.
11'x18'.
DOWN
Clos
Clos.
Hall
Clos.
Chamber.
14'x15'.
Roof

Principal Floor Plan. Second Floor Plan.

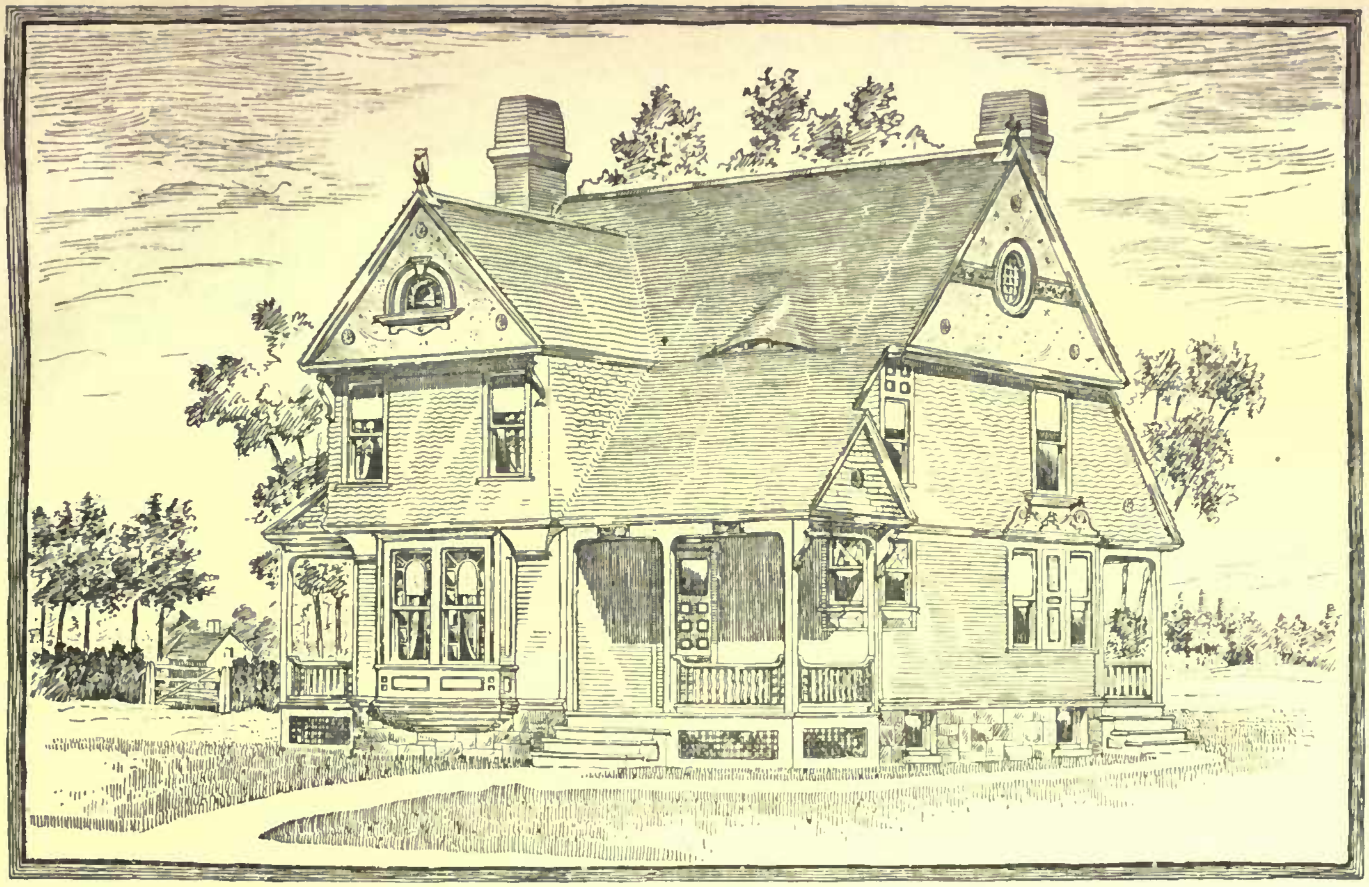


VIEW.

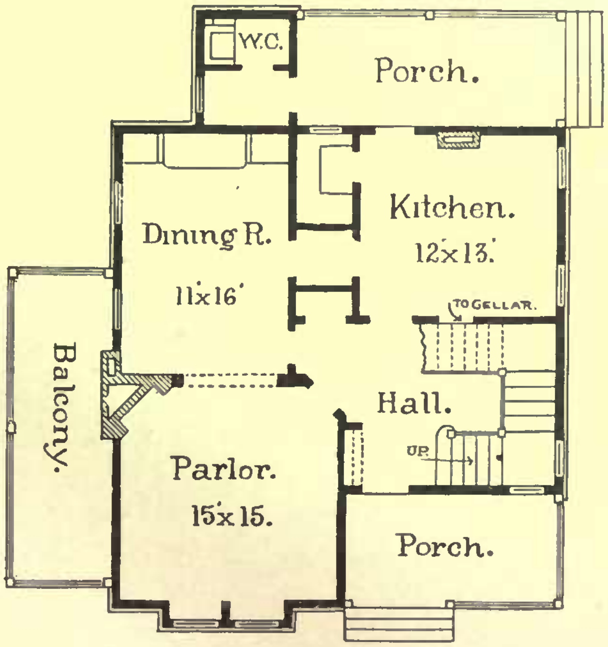

W.C.
Kitchen.
10'x11'.
Porch.
DOWN
UP
Dining R.
11'x15'.
Library.
11'x10'
Parlor.
13'x16'.
Hall
UP
Veranda.
DOWN
UP
Clos.
Passage 3' Wide.
Chamber.
7'x11'.
Chamber
11'x11'.
Chamber
11'x11'
DOWN
Hall
Clos.
Chamber.
13'x13'
Roof.

Principal Floor Plan.

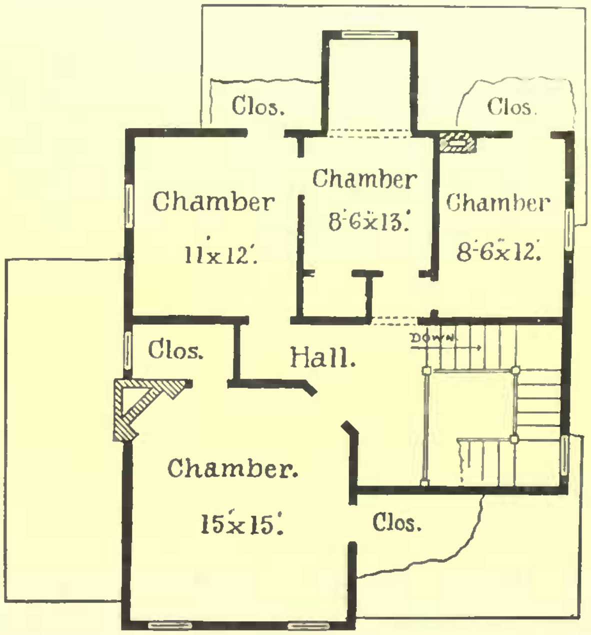
Second Floor Plan.



VIEW.

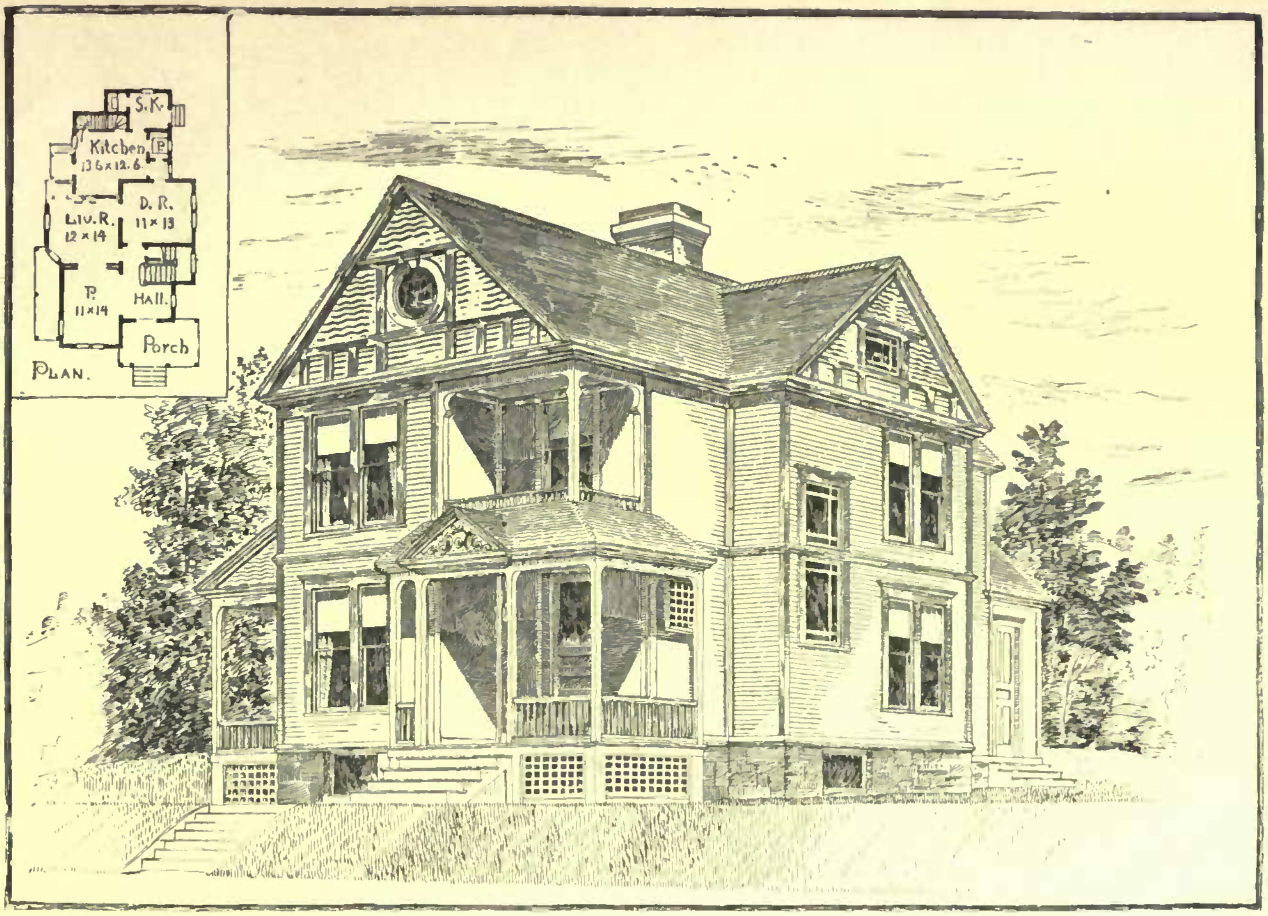

W.C.
Porch.
Kitchen.
12'x13'.
Dining R.
11'x16'
TO CELLAR.
Balcony.
Hall.
UP.
Parlor.
15'x15.
Porch.

Principal Floor Plan.

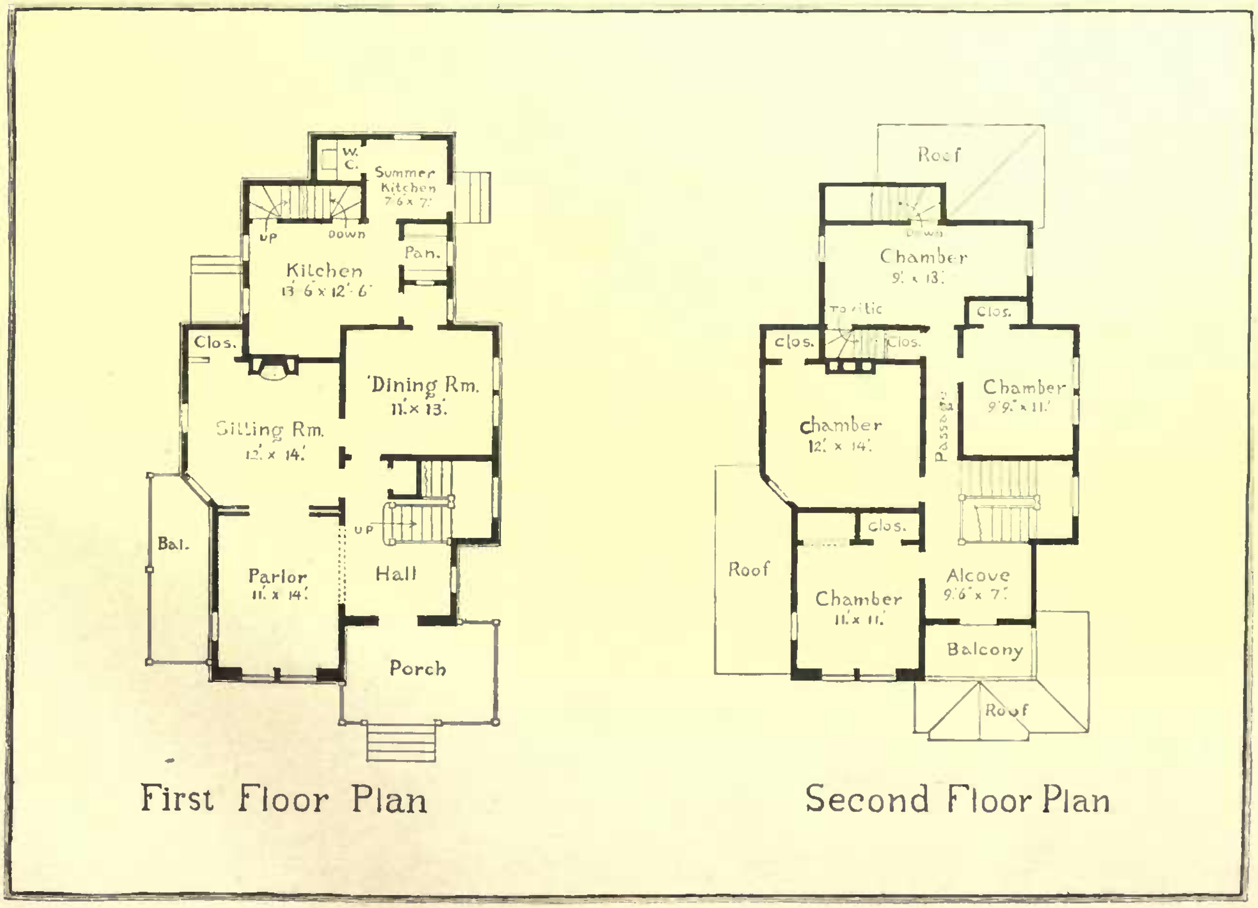

Clos.
Clos.
Chamber
11'x12'.
Chamber
8'-6"x13'.
Chamber
8'-6"x12'.
Clos.
Hall.
DOWN
Chamber.
15'x15'.
Clos.

Second Floor Plan.

PLATE XII. DESIGN 12.


S.K.
Kitchen
13.6×12.6
D.R.
11×13
Liv.R.
12×14
P.
11×14
Hall.
Porch
PLAN.

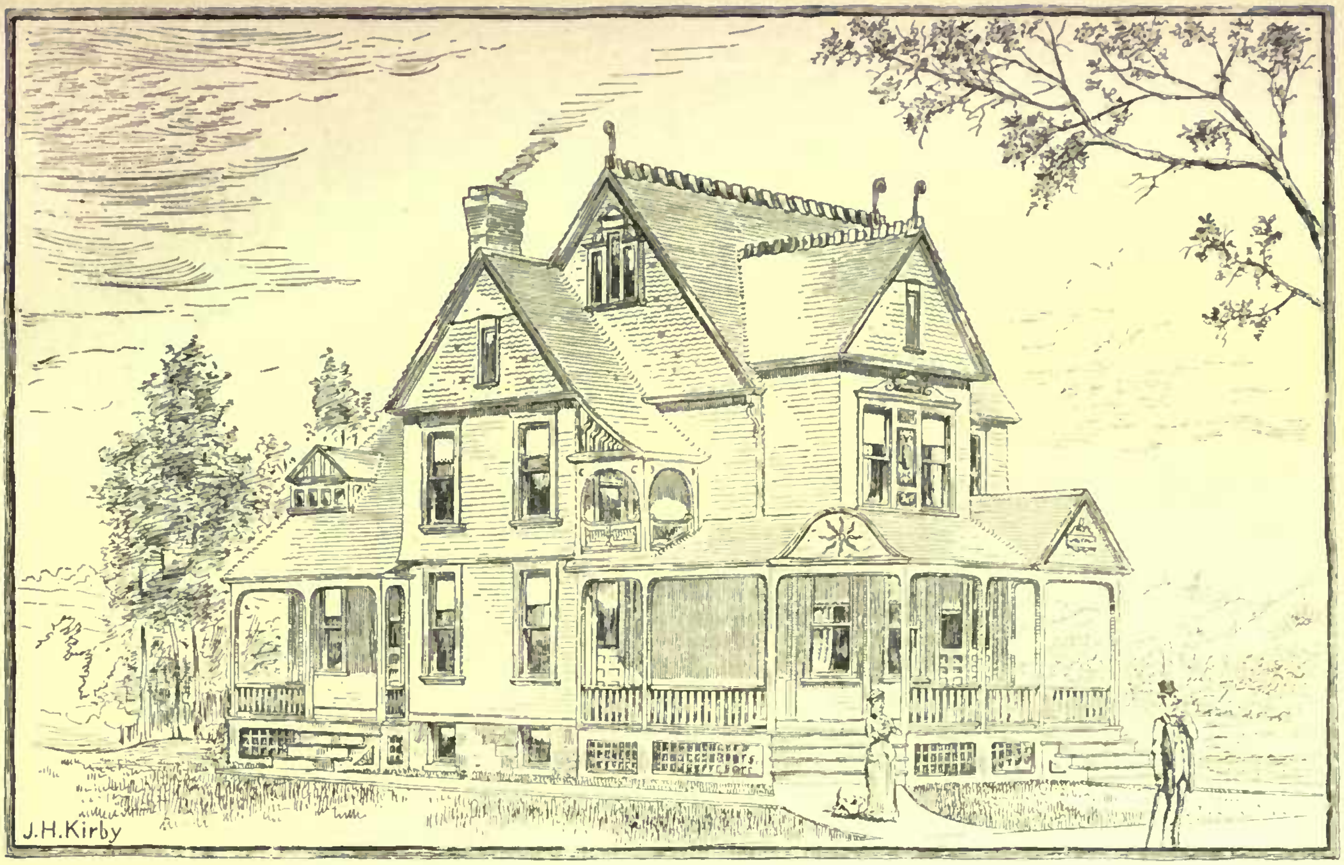
VIEW.


W.C.
Summer Kitchen
7'6"×7'
UP
DOWN
Pan.
Kitchen
13'6"×12'6"
Clos.
Dining Rm.
11'×13'
Sitting Rm.
12'×14'
Bal.
UP
Parlor
11'×14'
Hall
Porch
Roof
Down
Chamber
9'×13'
To Attic
Clos.
clos.
Clos.
Chamber
9'9"×11'
chamber
12'×14'
Passage
clos.
Roof
Chamber
11'×11'
Alcove
9'6"×7'
Balcony
Roof

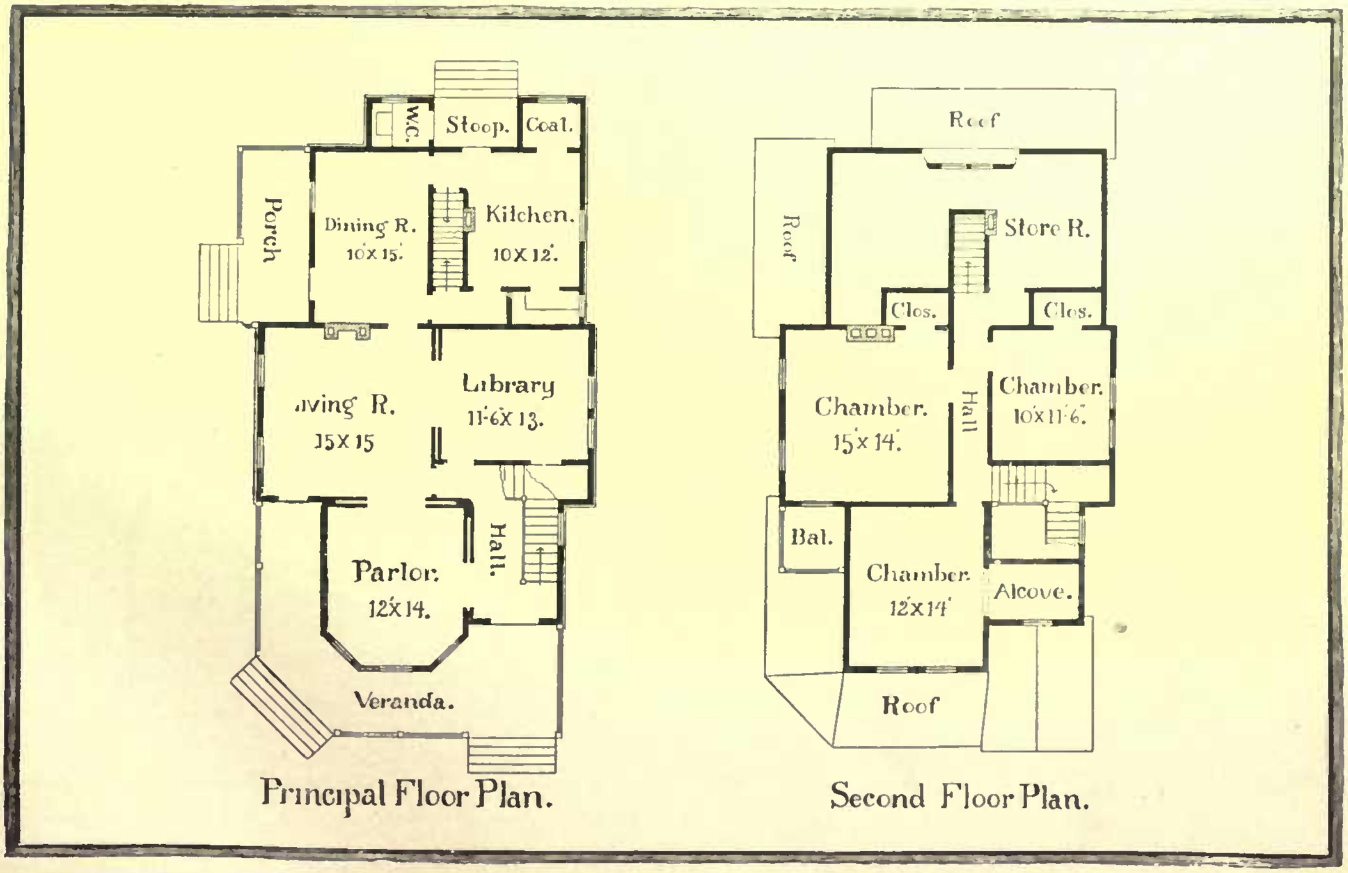
First Floor Plan

Second Floor Plan

PLATE XIII. DESIGN 13.

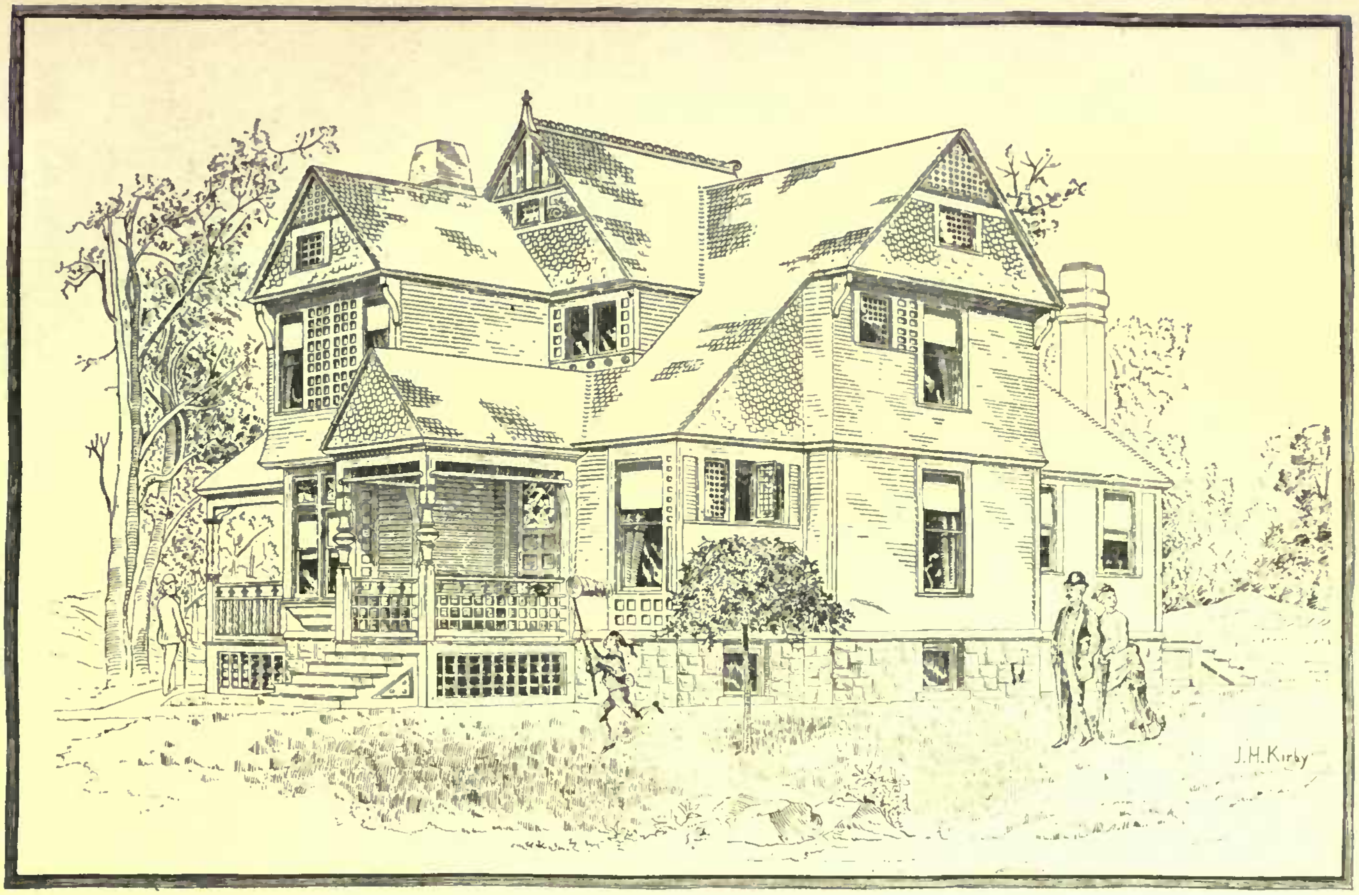


VIEW.


W.C.
Stoop.
Coal.
Porch
Dining R.
10'x 15'.
Kitchen.
10 X 12'.
Living R.
15 X 15
Library
11'-6' X 13.
Parlor.
12'x 14.
Hall.
Veranda.
Roof
Roof
Store R.
Clos.
Clos.
Chamber.
15'x 14'.
Hall
Chamber.
10'x 11'-6'.
Bal.
Chamber.
12'x 14'
Alcove.
Roof

Principal Floor Plan. Second Floor Plan.

PLATE XIV. DESIGN 14.



VIEW.

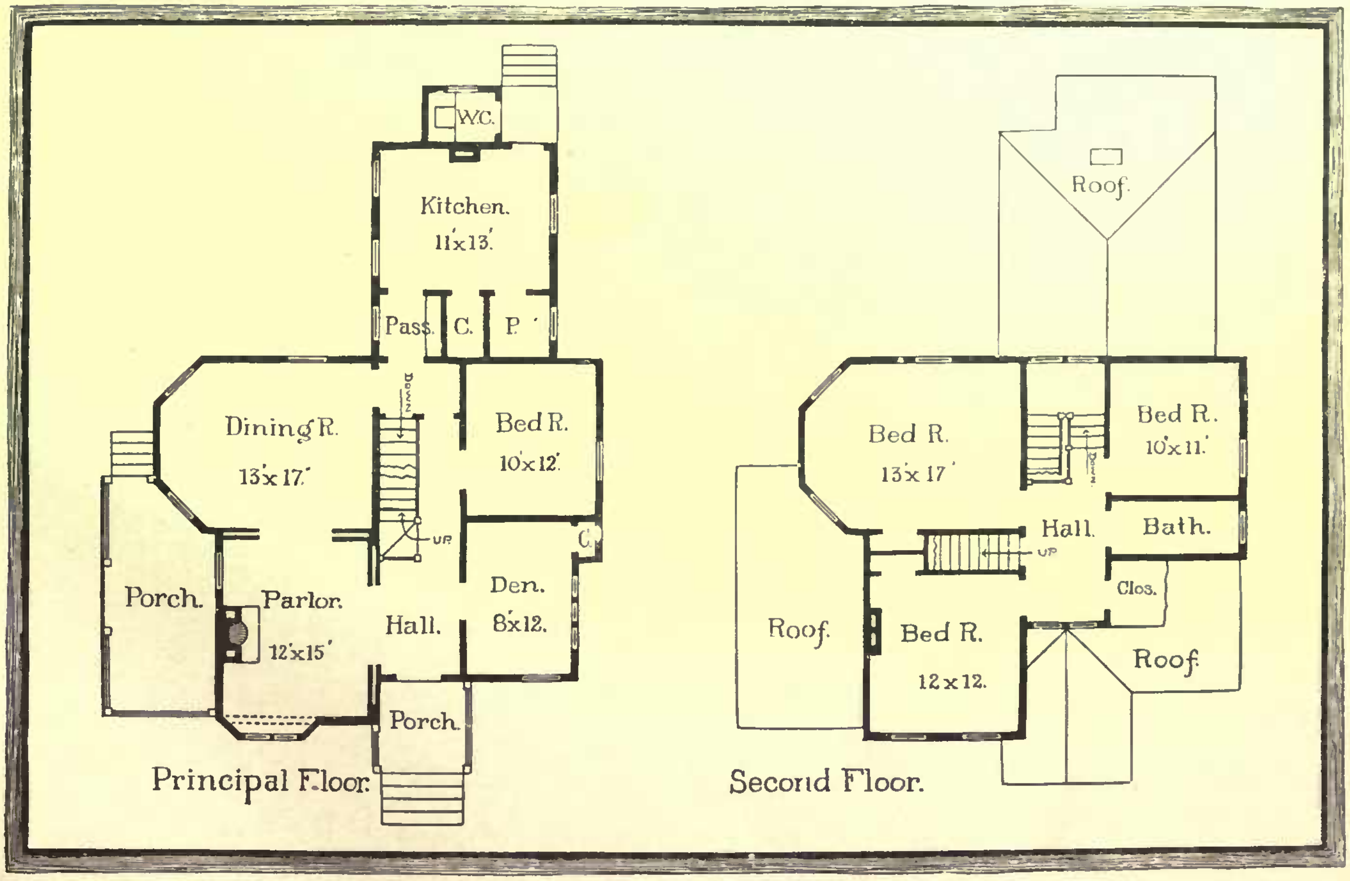
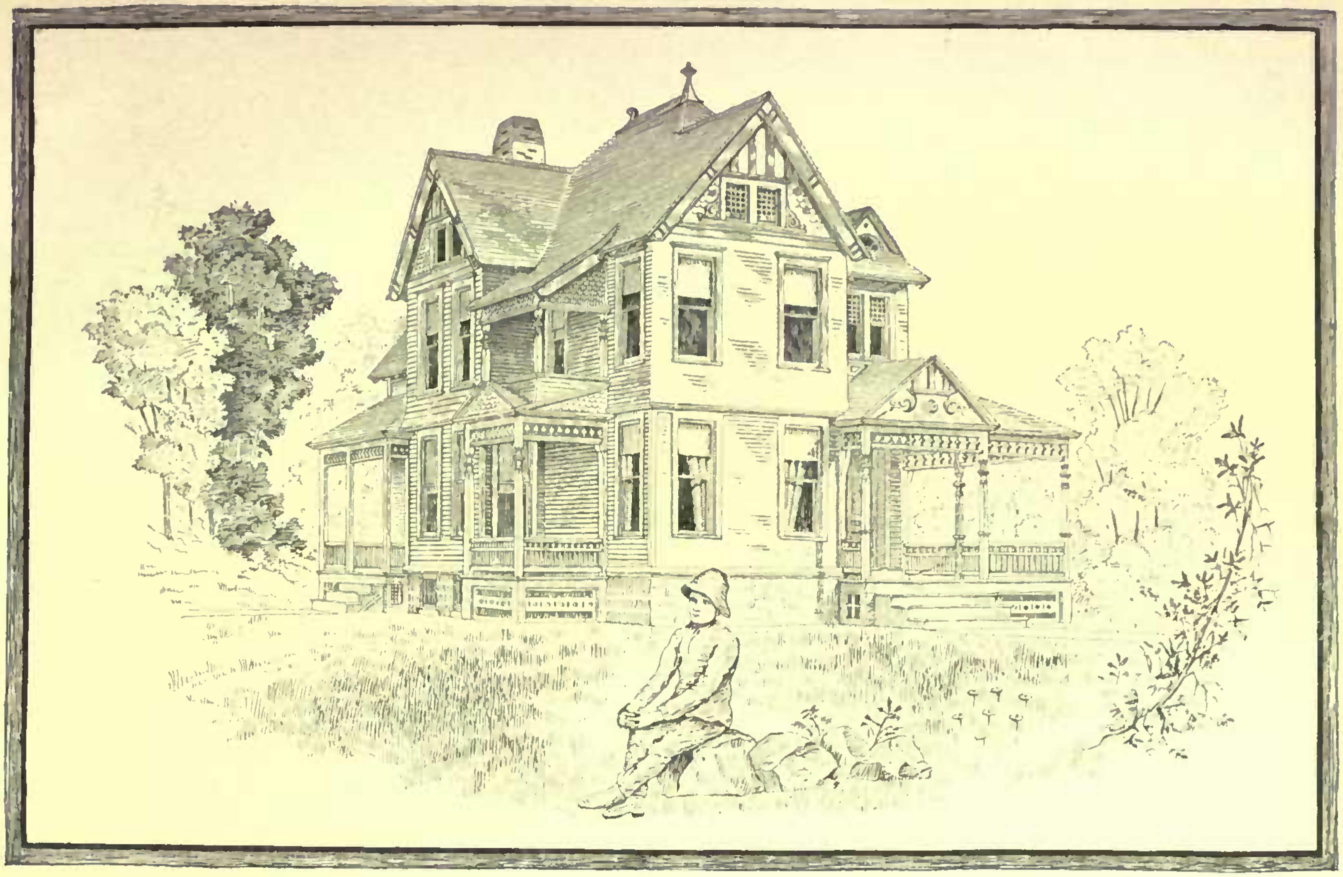
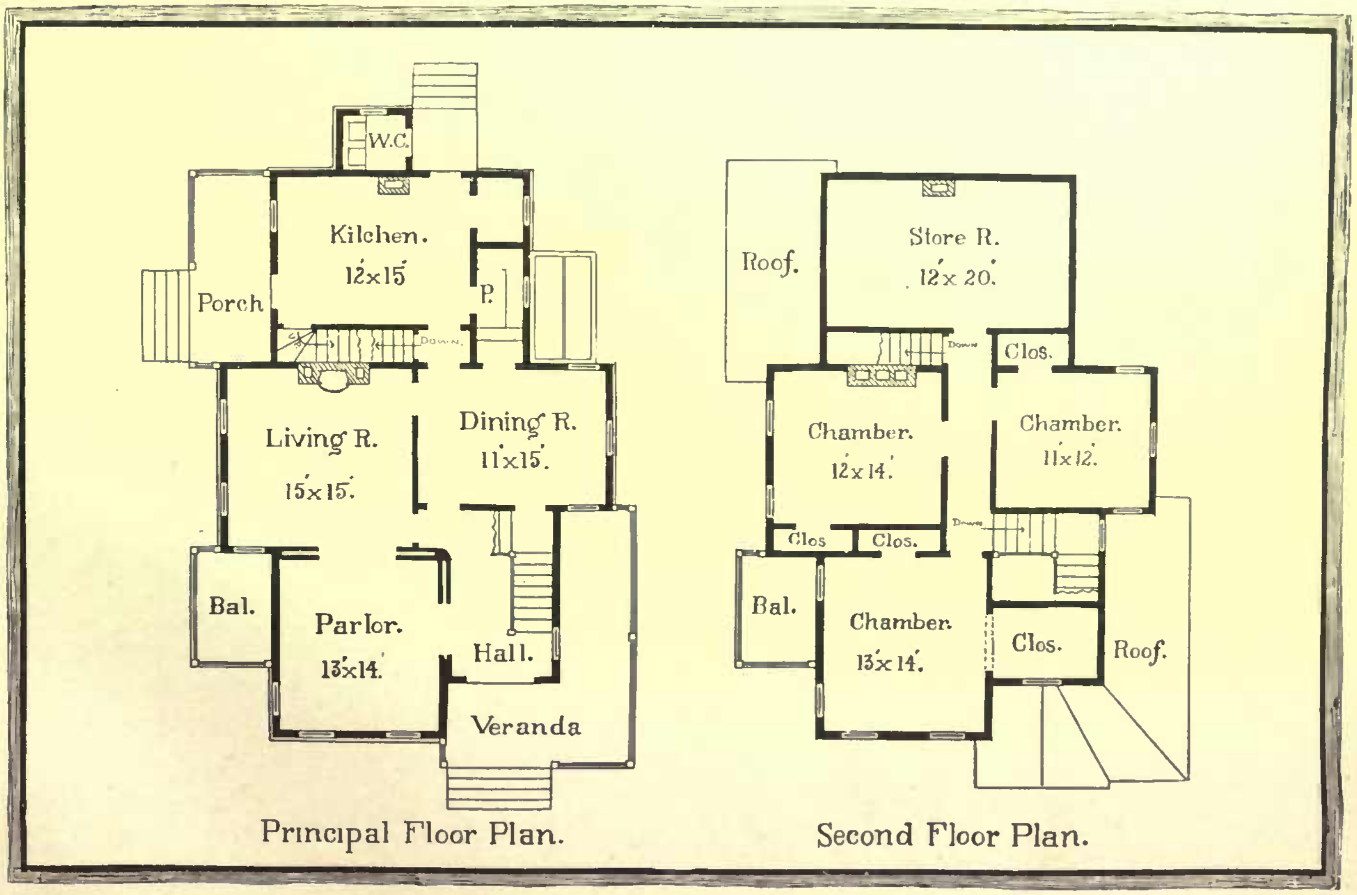

W.C.
Kitchen. 11'x13'.
Pass.
C.
P.
Dining R. 13'x 17'
Bed R. 10'x 12'.
Down
Up
C.
Porch.
Parlor. 12'x15'
Hall.
Den. 8'x12.
Porch.
Principal Floor.
Roof.
Bed R. 13'x 17'
Bed R. 10'x 11'.
Down
Hall.
Bath.
Up
Clos.
Roof.
Bed R. 12 x 12.
Roof.
Second Floor.

PLATE XV. DESIGN 15.

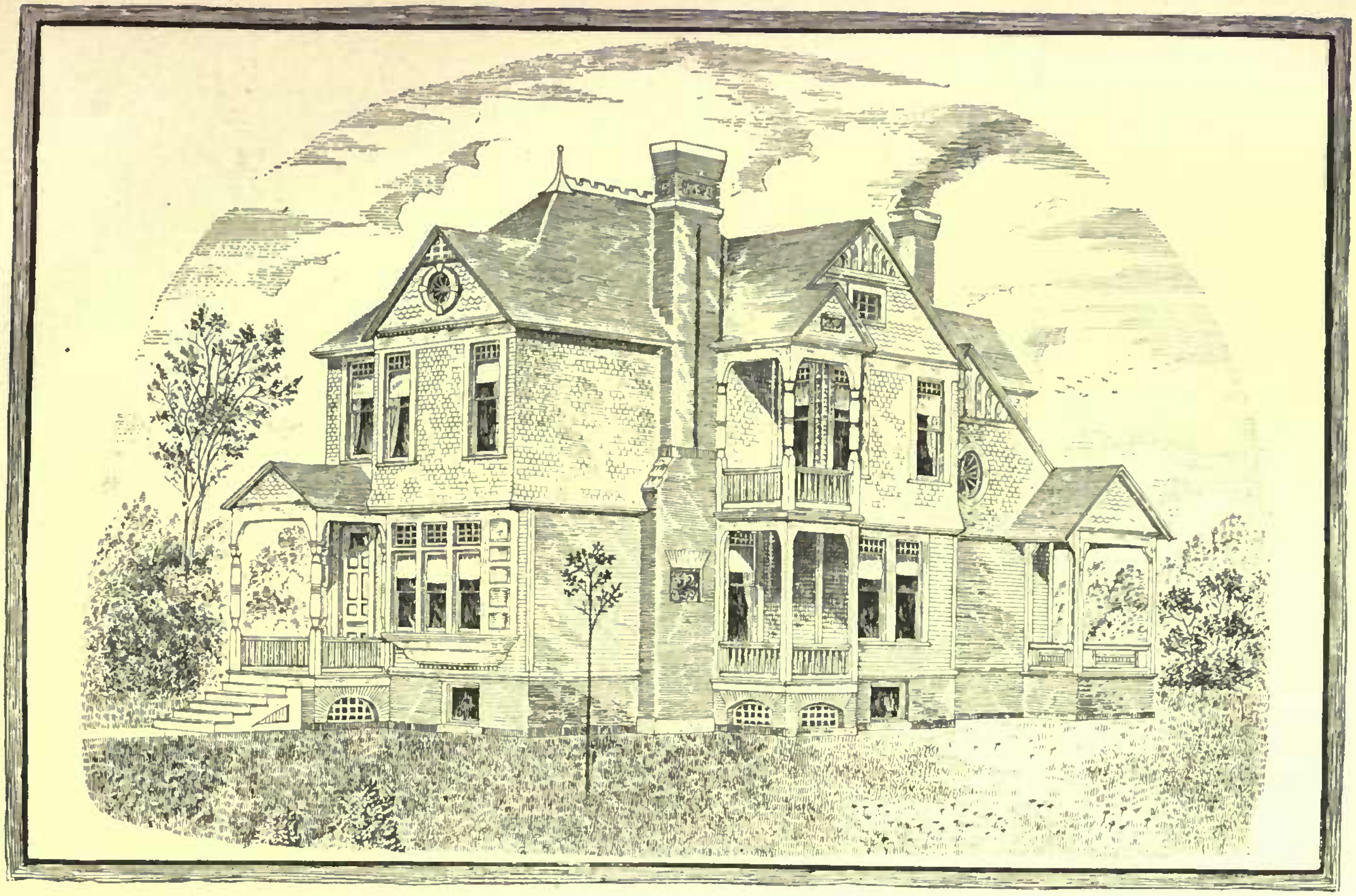


VIEW.

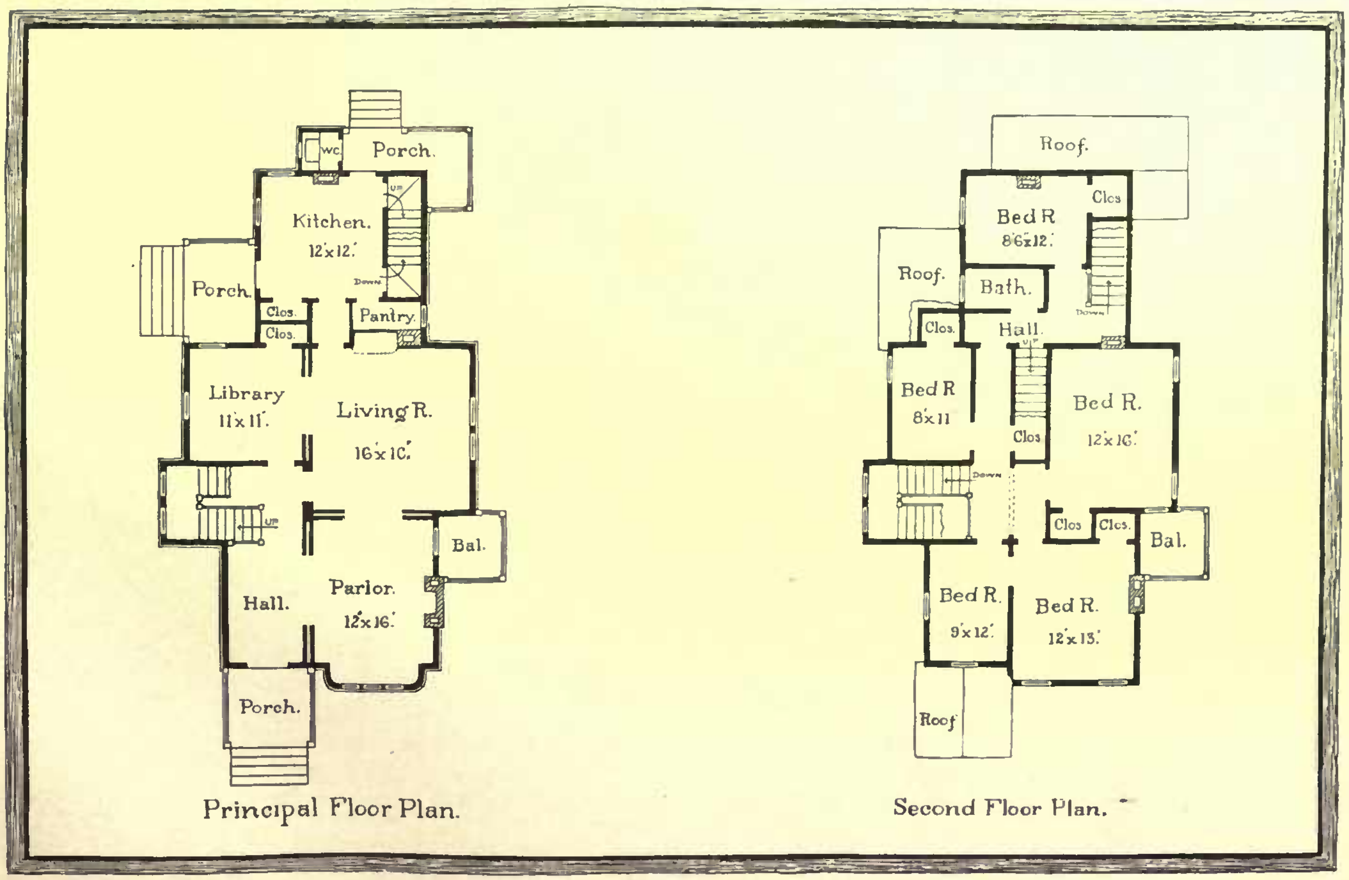

W.C.
Kitchen.
12'x15'
Porch
P.
Down.
Living R.
15'x15'.
Dining R.
11'x15'.
Bal.
Parlor.
13'x14'.
Hall.
Veranda
Roof.
Store R.
12'x 20'.
Down
Clos.
Chamber.
12'x14'.
Chamber.
11'x12'.
Clos
Clos.
Down
Bal.
Chamber.
13'x14'.
Clos.
Roof.

Principal Floor Plan.

Second Floor Plan.



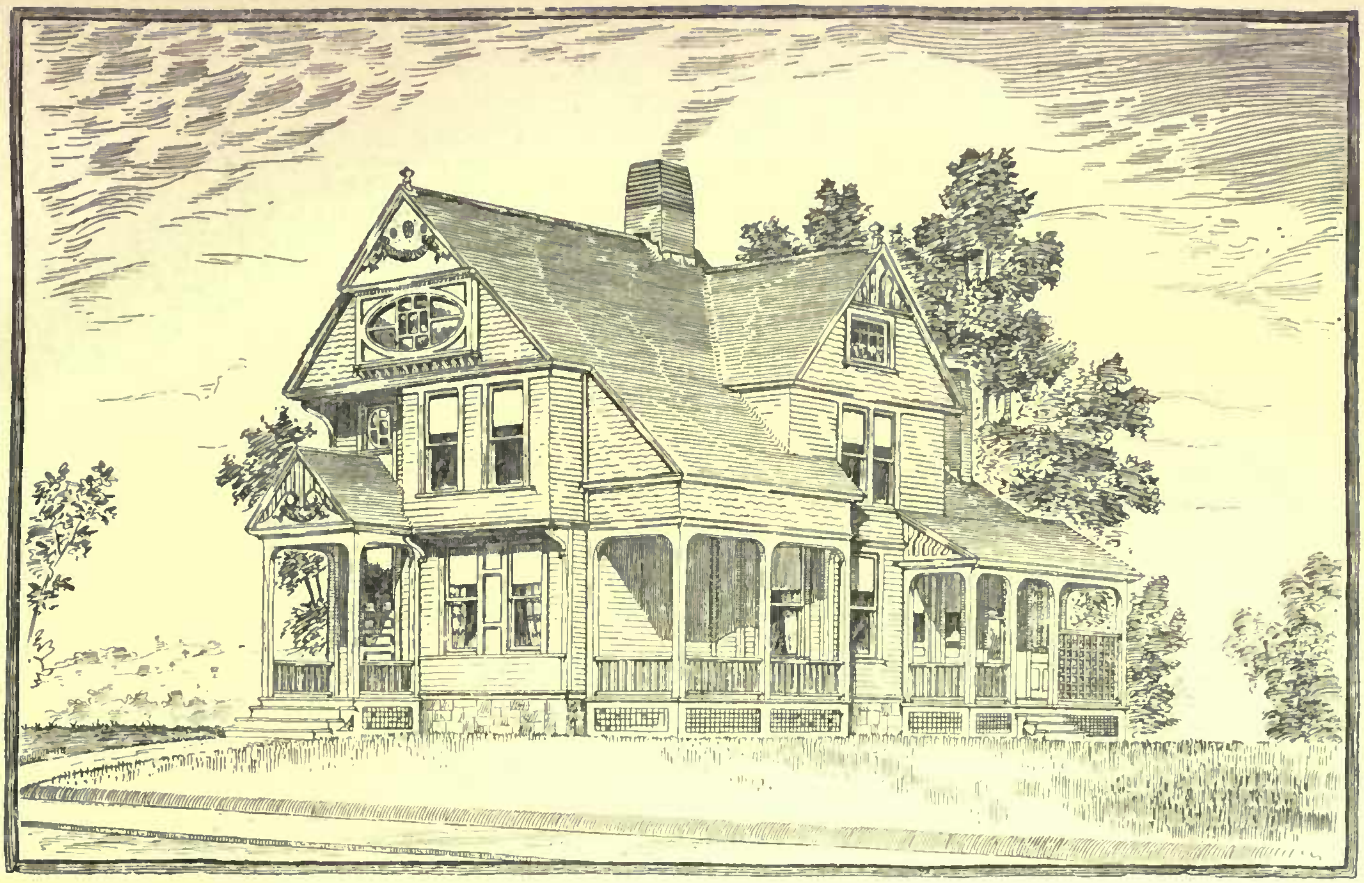
VIEW.


WC
Porch.
Kitchen.
12'x12'.
Up
Down
Porch.
Clos.
Clos.
Pantry.
Library
11'x11'.
Living R.
16'x16'.
Up
Bal.
Hall.
Parlor.
12'x16'.
Porch.
Roof.
Clos
Bed R
8'6"x12'.
Roof.
Bath.
Down
Clos.
Hall.
Up
Bed R
8'x11
Bed R.
12'x16'.
Clos
Down
Clos
Clos.
Bal.
Bed R.
9'x12'.
Bed R.
12'x13'.
Roof

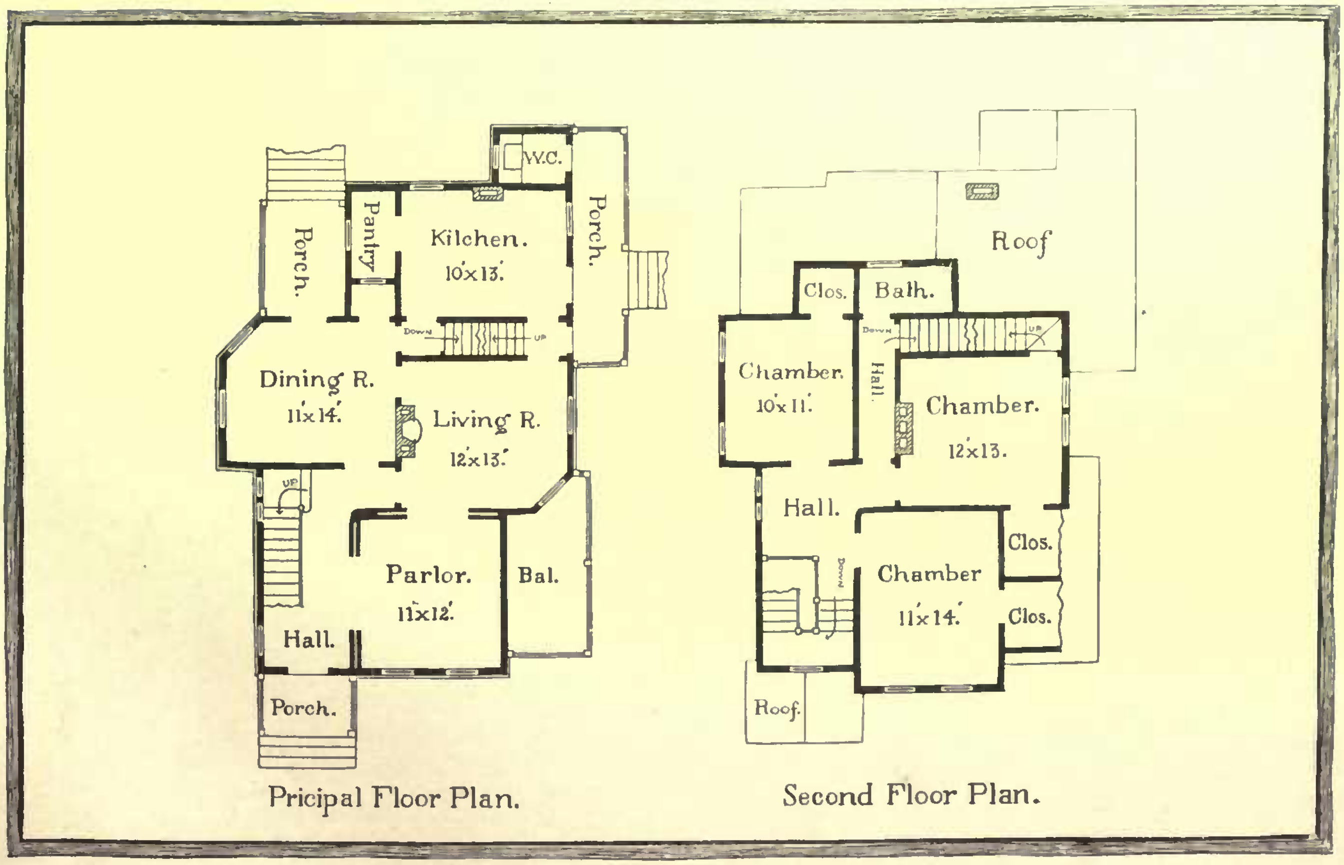
Principal Floor Plan.

Second Floor Plan.

PLATE XVII. DESIGN 17.

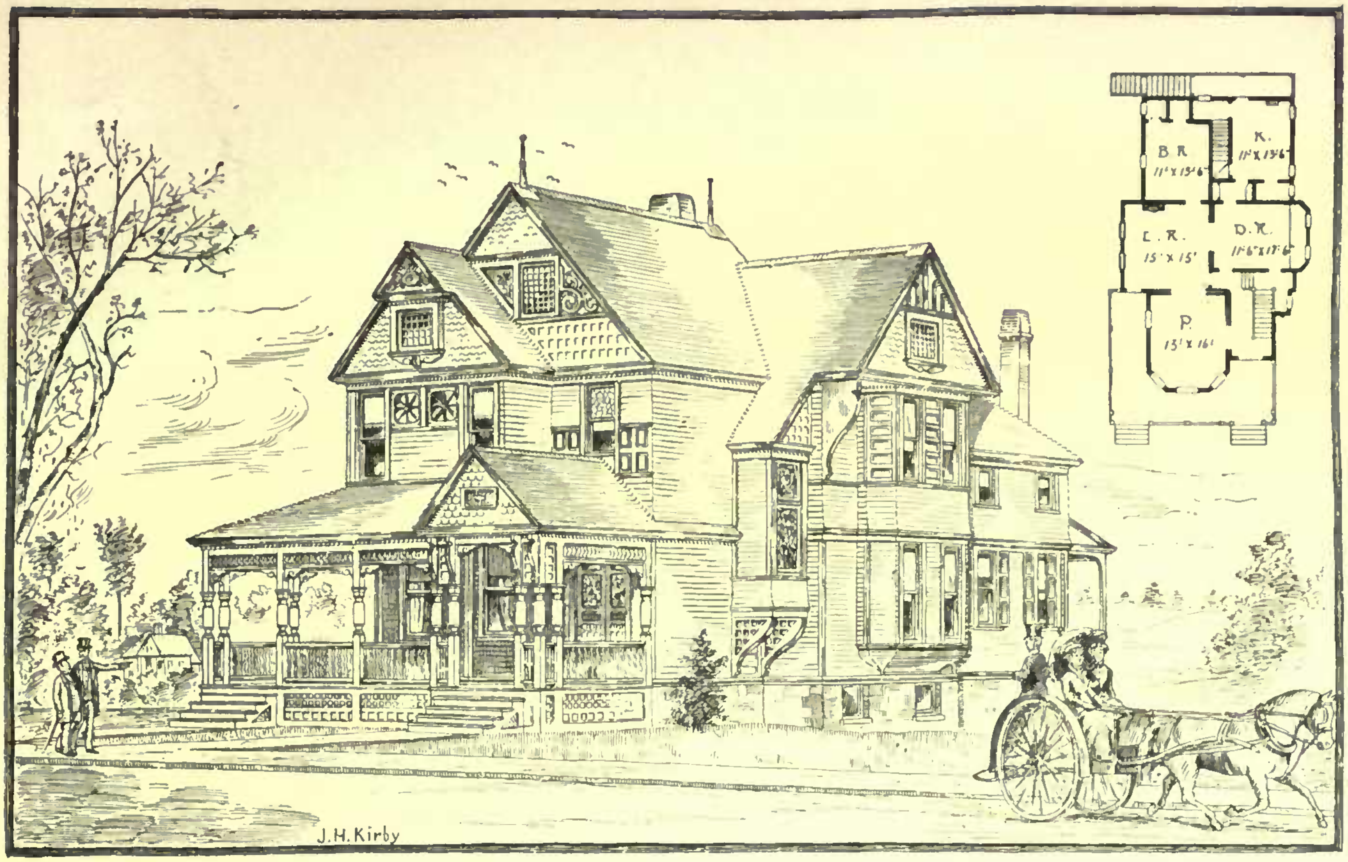


VIEW.

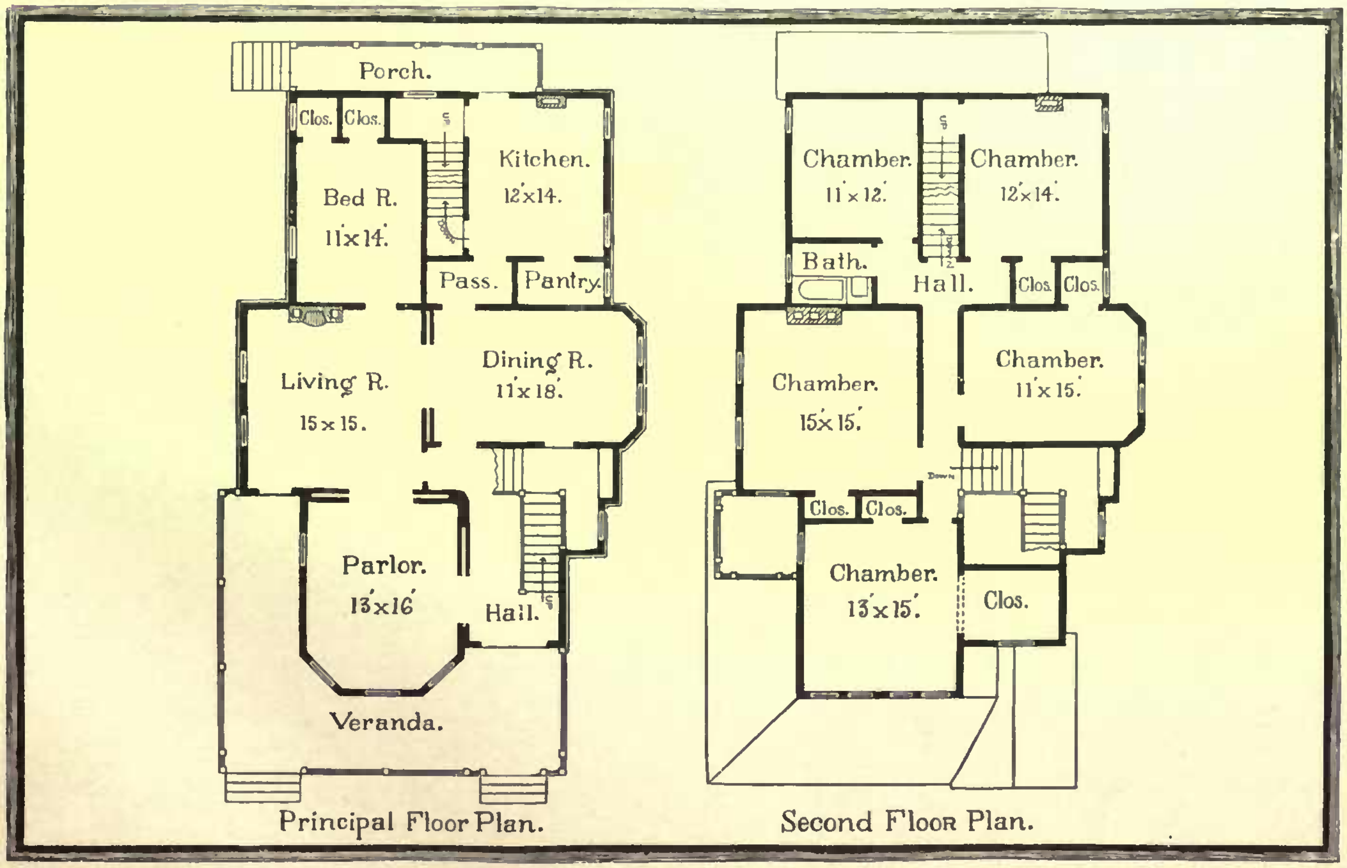

Porch.
Pantry
Kitchen.
10'x13'.
W.C.
Porch.
Down
Up
Dining R.
11'x14'.
Living R.
12'x13'.
Up
Parlor.
11'x12'.
Bal.
Hall.
Porch.
Roof
Clos.
Bath.
Down
Up
Chamber.
10'x11'.
Hall.
Chamber.
12'x13'.
Hall.
Clos.
Down
Chamber
11'x14'.
Clos.
Roof.

Pricipal Floor Plan. Second Floor Plan.

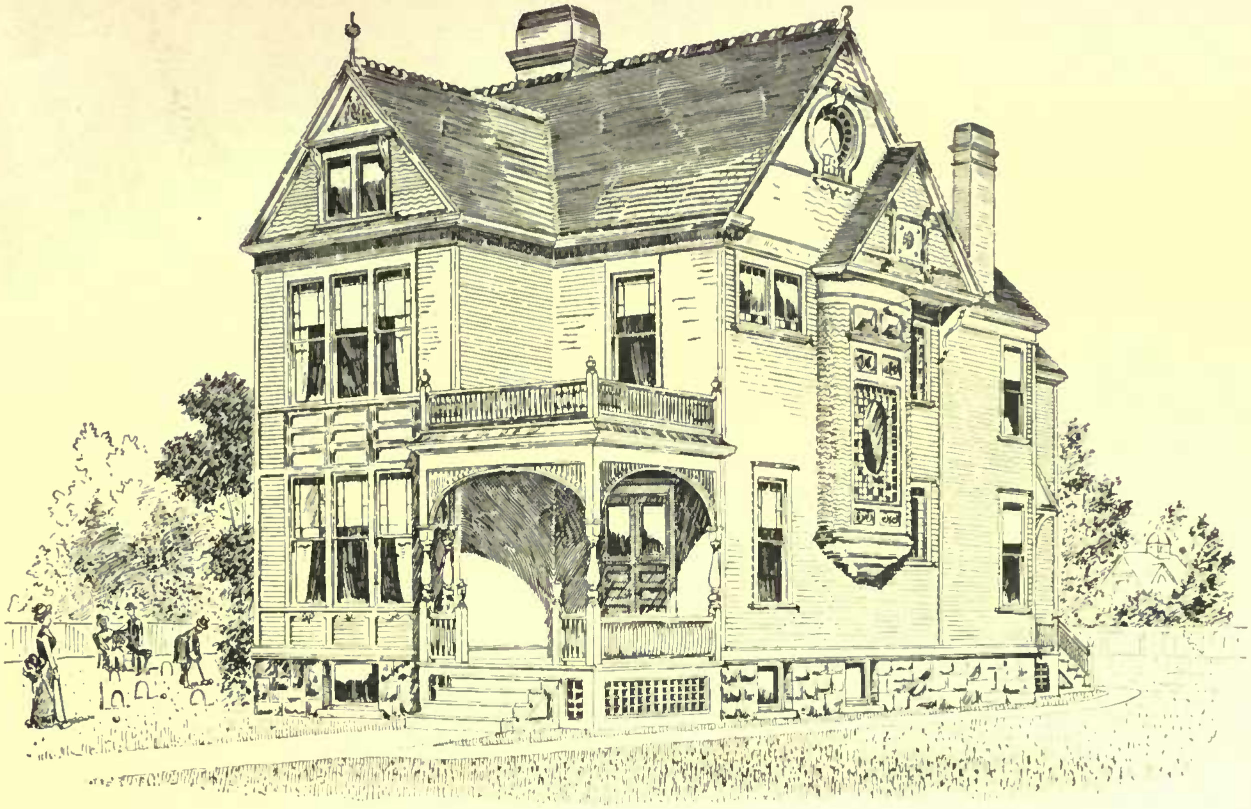
PLATE XVIII. DESIGN 18.


B.R.
11'x13'6"
K.
11'x14'6"
L.R.
15'x15'
D.R.
11'6"x17'6"
P.
13'x16'
J.H. Kirby

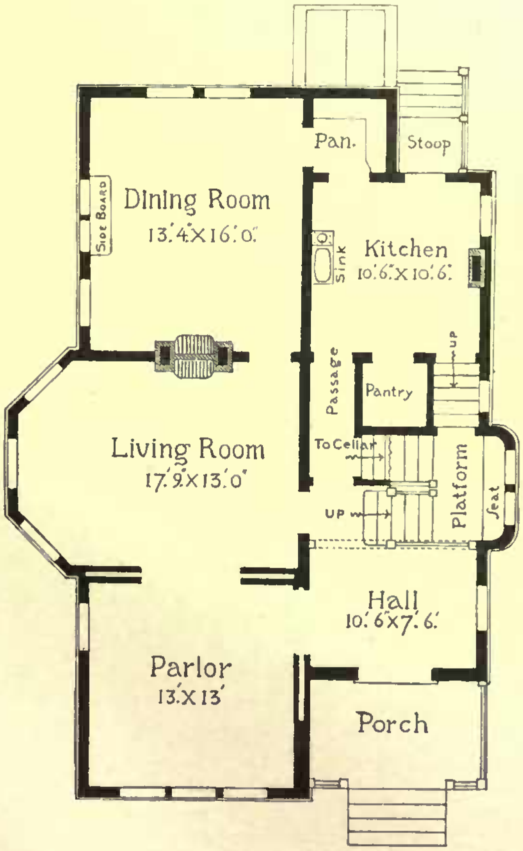
VIEW.


Porch.
Clos.
Clos.
Kitchen.
12'x14.
Bed R.
11'x14'.
Pass.
Pantry.
Living R.
15x15.
Dining R.
11'x18'.
Parlor.
13'x16'
Hall.
Veranda.
Chamber.
11'x12'.
Chamber.
12'x14'.
Bath.
Hall.
Clos.
Clos.
Chamber.
15'x15'.
Chamber.
11'x15'.
Down
Clos.
Clos.
Chamber.
13'x15'.
Clos.

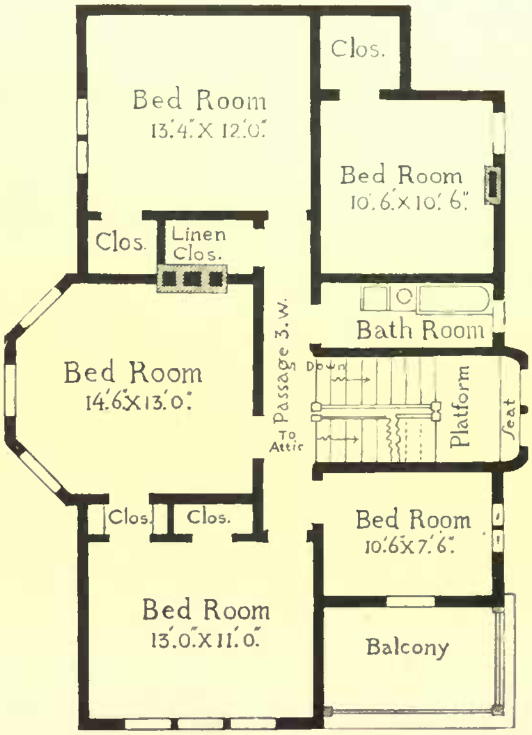
Principal Floor Plan. Second Floor Plan.



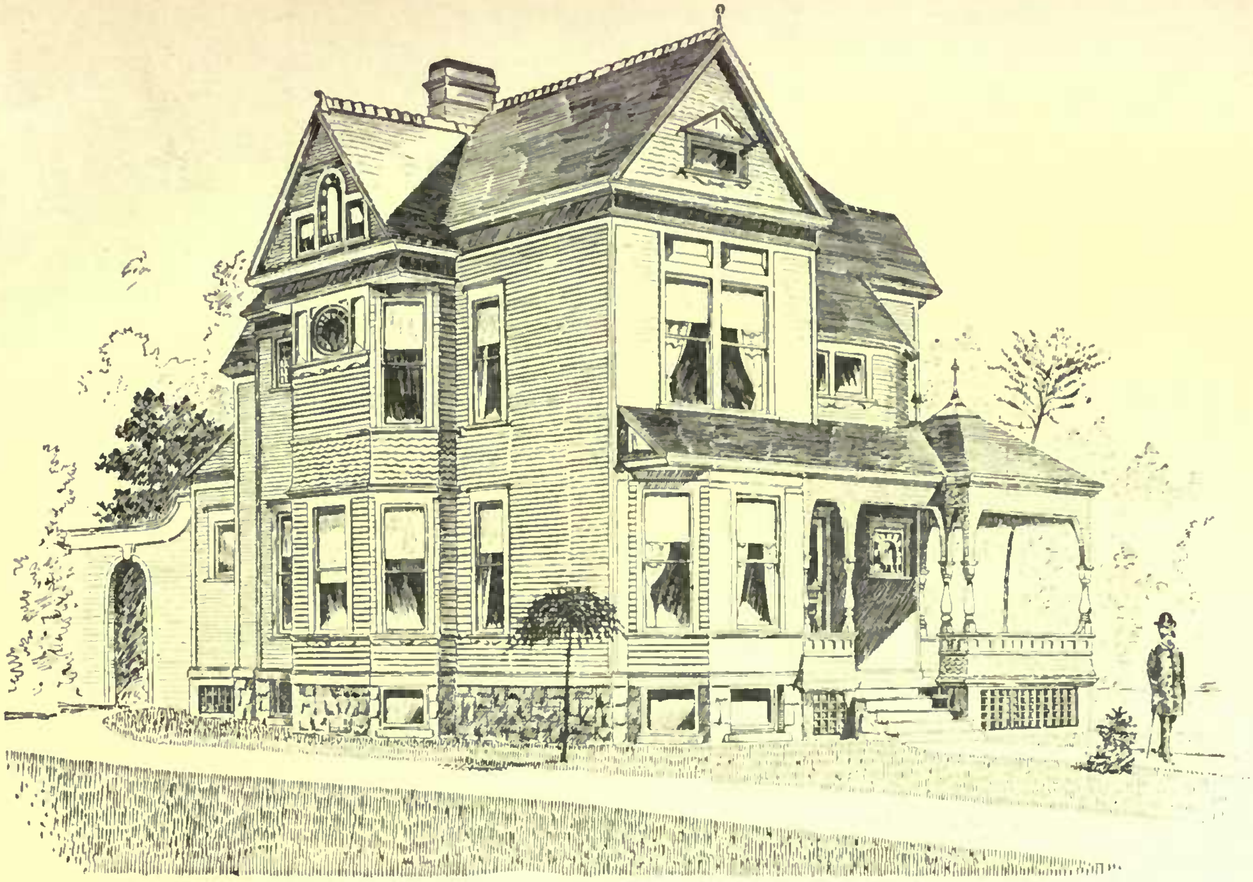
VIEW.


Pan.
Stoop
Dining Room
13'.4"x16'.0"
Side Board
Sink
Kitchen
10'.6"x10'.6"
Passage
Pantry
UP
To Cellar
Platform
Seat
Living Room
17'.9"x13'.0"
UP
Hall
10'.6"x7'.6"
Parlor
13'x13'
Porch

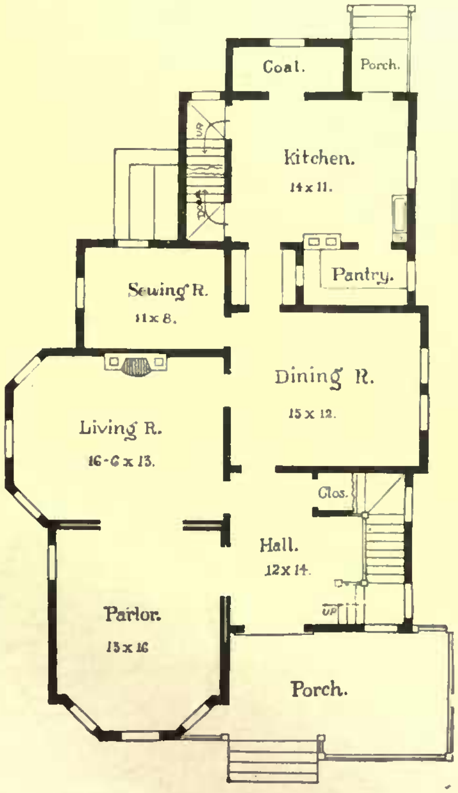
FIRST FLOOR PLAN.


Clos.
Bed Room
13'.4"x12'.0"
Bed Room
10'.6"x10'.6"
Clos.
Linen
Clos.
Bath Room
Passage 3. w.
Down
Platform
Seat
Bed Room
14'.6"x13'.0"
To
Attic
Clos.
Clos.
Bed Room
10'.6"x7'.6"
Bed Room
13'.0"x11'.0"
Balcony

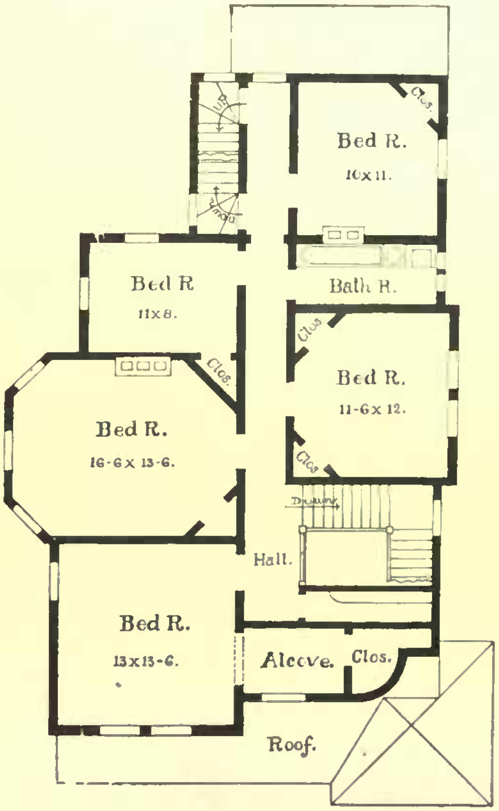
SECOND FLOOR PLAN.



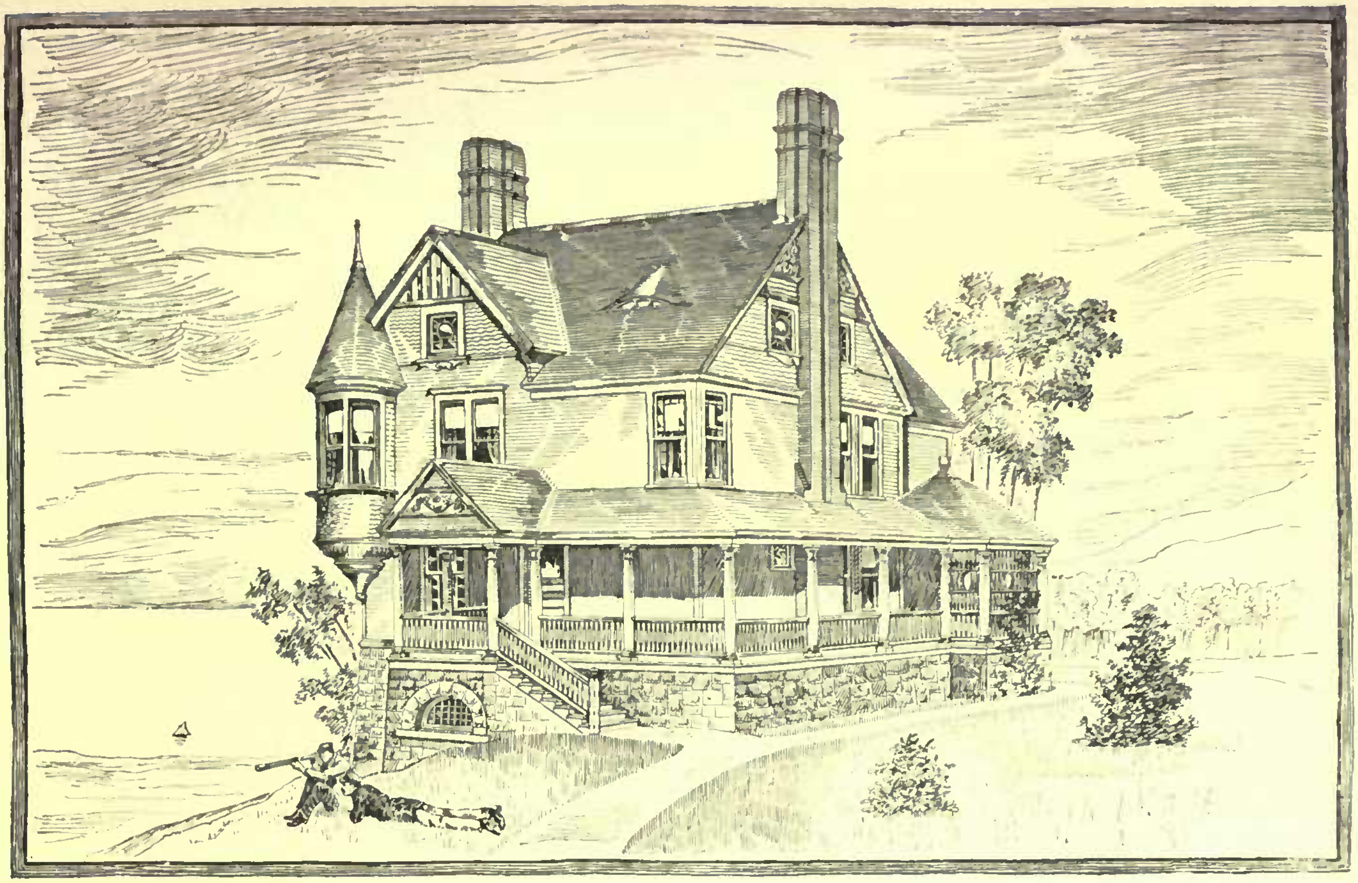
VIEW.


Coal.
Porch.
UP
DOWN
Kitchen.
14 x 11.
Pantry.
Sewing R.
11 x 8.
Dining R.
15 x 12.
Living R.
16-6 x 13.
Clos.
Hall.
12 x 14.
UP
Parlor.
13 x 16
Porch.

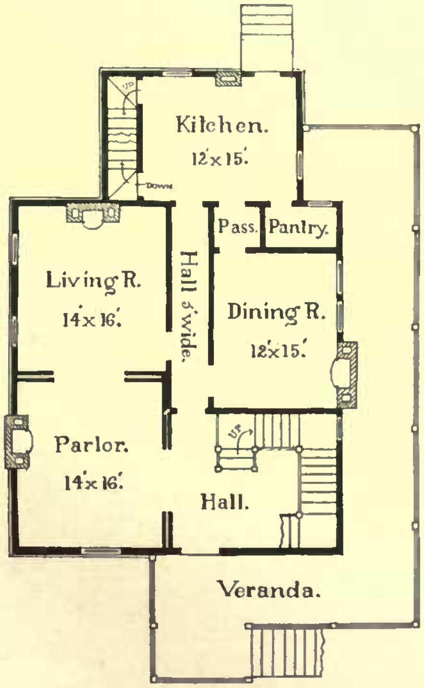
FIRST FLOOR PLAN.


Clos.
Bed R.
10 x 11.
UP
DOWN
Bed R
11 x 8.
Bath R.
Clos.
Clos.
Bed R.
11-6 x 12.
Clos.
Bed R.
16-6 x 13-6.
DOWN
Hall.
Bed R.
13 x 13-6.
Alcove.
Clos.
Roof.

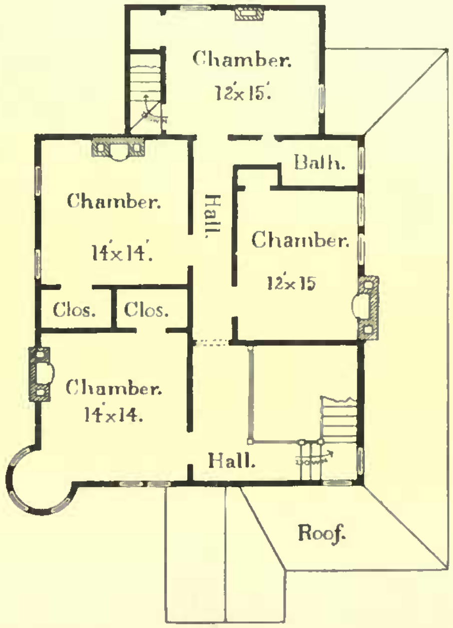
SECOND FLOOR PLAN.



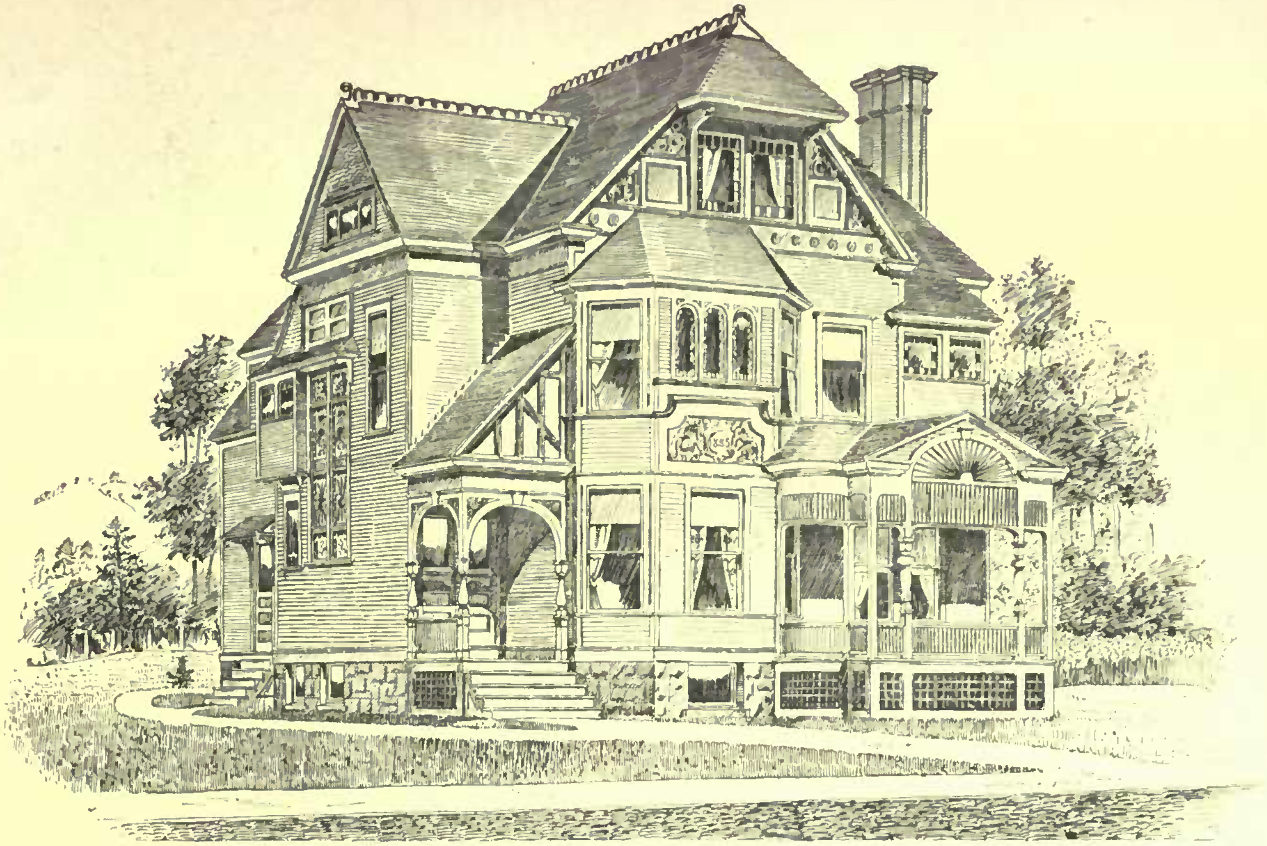
VIEW.


Kitchen.
12'x15'.
Down
Pass.
Pantry.
Living R.
14'x16'.
Hall 5' wide.
Dining R.
12'x15'.
Parlor.
14'x16'.
Up
Hall.
Veranda.

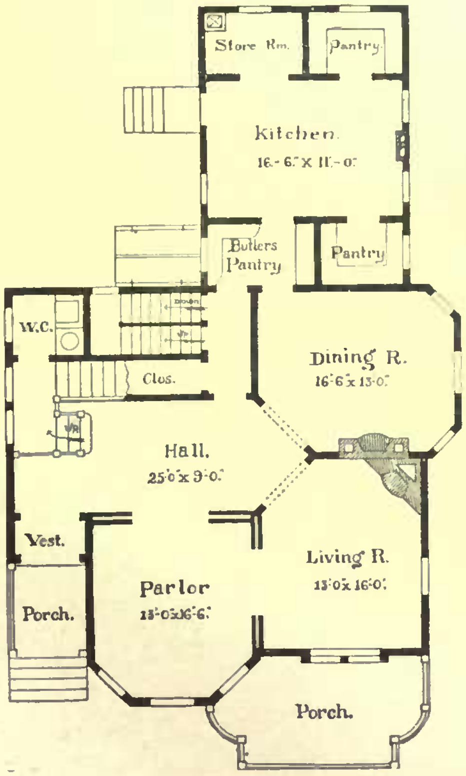
Principal Floor Plan.


Chamber.
12'x15'.
Bath.
Chamber.
14'x14'.
Hall.
Chamber.
12'x15
Clos.
Clos.
Chamber.
14'x14.
Hall.
Down
Roof.

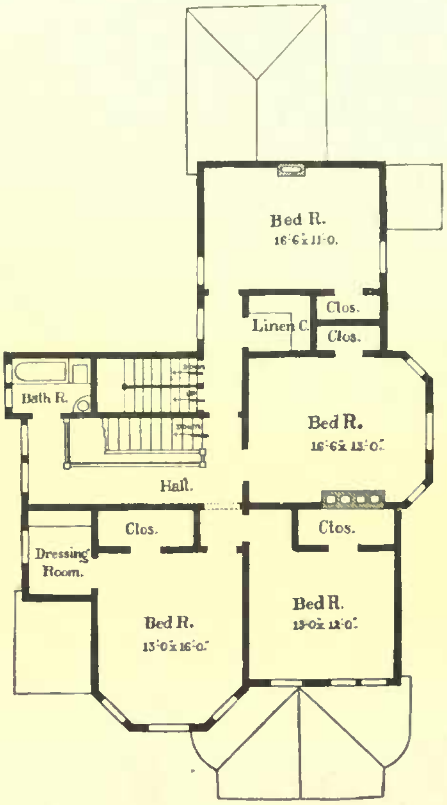
Second Floor Plan.



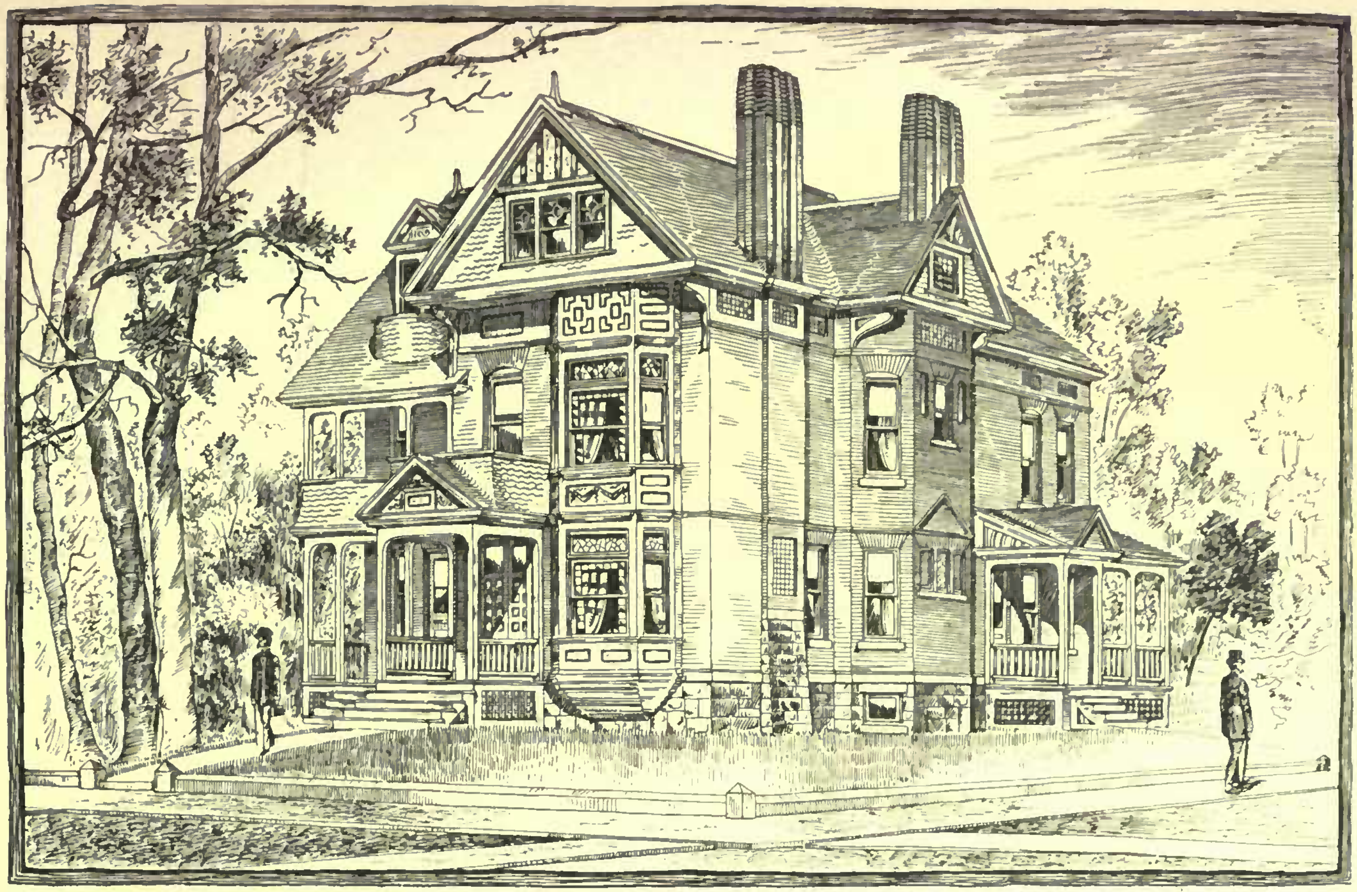
VIEW.


Store Rm.
Pantry.
Kitchen.
16'-6" x 11'-0"
Butlers Pantry
Pantry
W.C.
Down
Clos.
Dining R.
16'-6" x 13'-0"
Hall.
25'-0" x 9'-0"
Vest.
Parlor
13'-0"x16'-6"
Living R.
13'-0" x 16'-0"
Porch.
Porch.

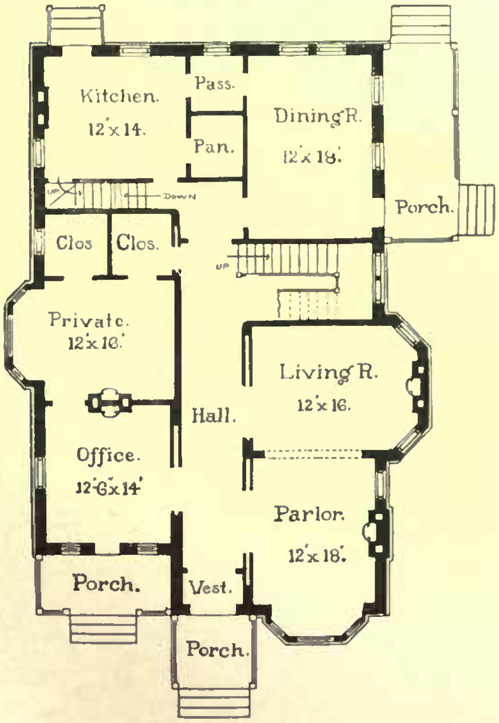
FIRST FLOOR PLAN.


Bed R.
16'-6" x 11'-0"
Clos.
Linen C.
Clos.
Bath R.
Down
Bed R.
16'-6" x 13'-0"
Hall.
Clos.
Clos.
Dressing Room.
Bed R.
13'-0" x 16'-0"
Bed R.
13'-0" x 12'-0"

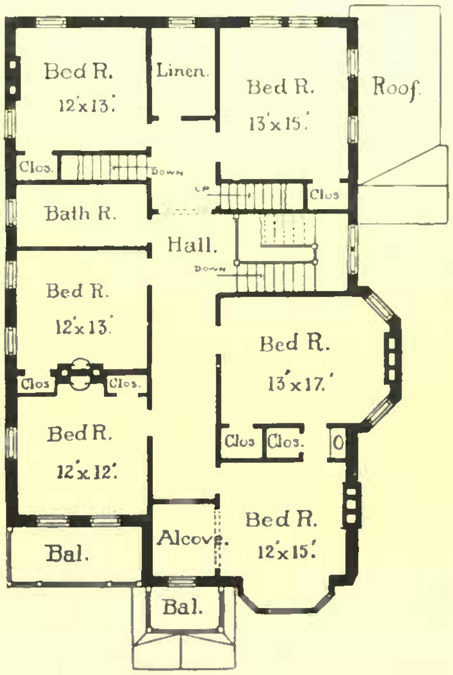
SECOND FLOOR PLAN.



VIEW.

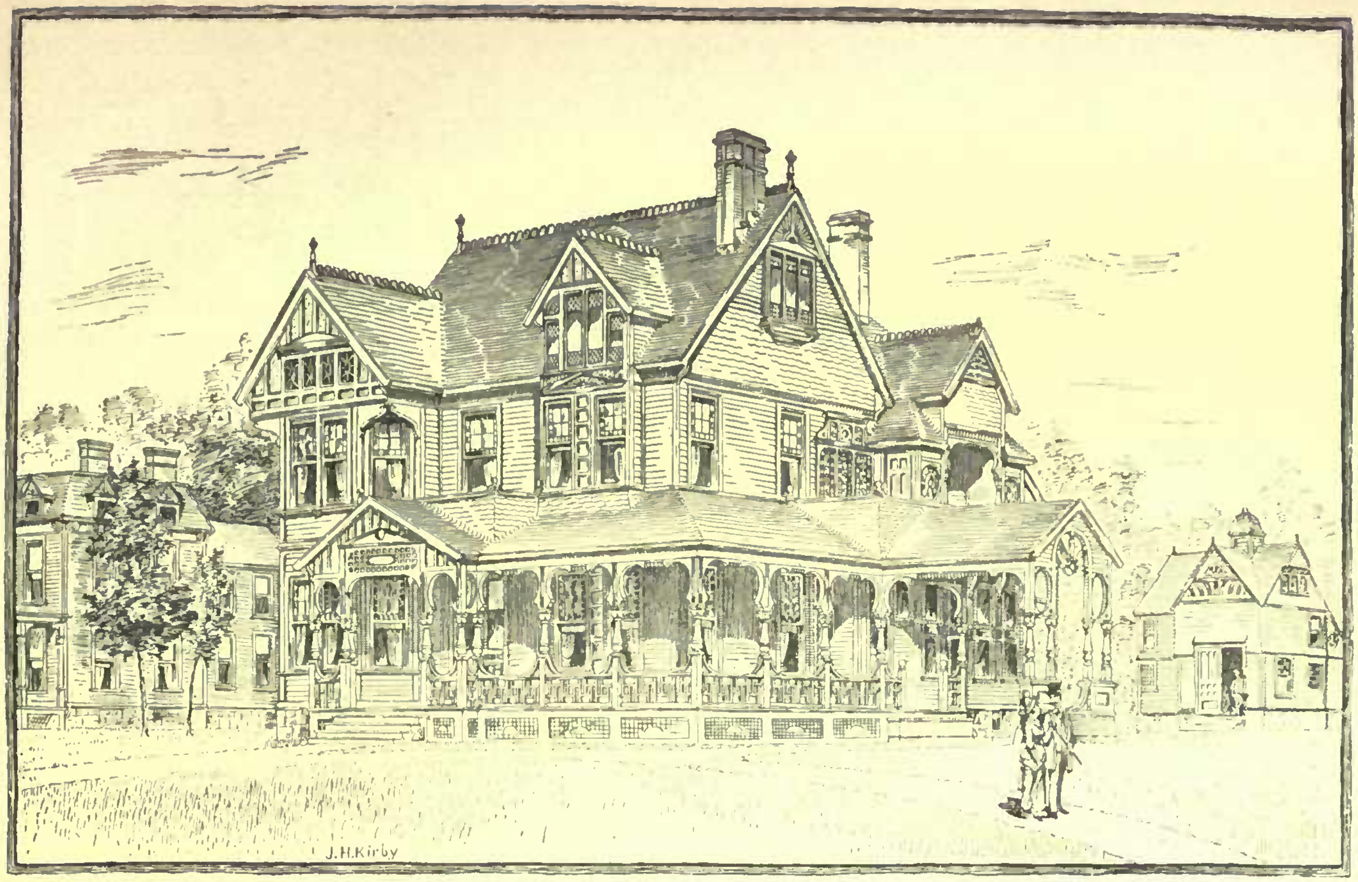

Kitchen.
12'x 14.
Pass.
Pan.
Dining R.
12'x 18'.
Porch.
UP
DOWN
Clos.
Clos.
UP
Private.
12'x 16'.
Hall.
Living R.
12'x 16.
Office.
12'-6"x 14'
Parlor.
12'x 18'.
Porch.
Vest.
Porch.

Principal Floor Plan.

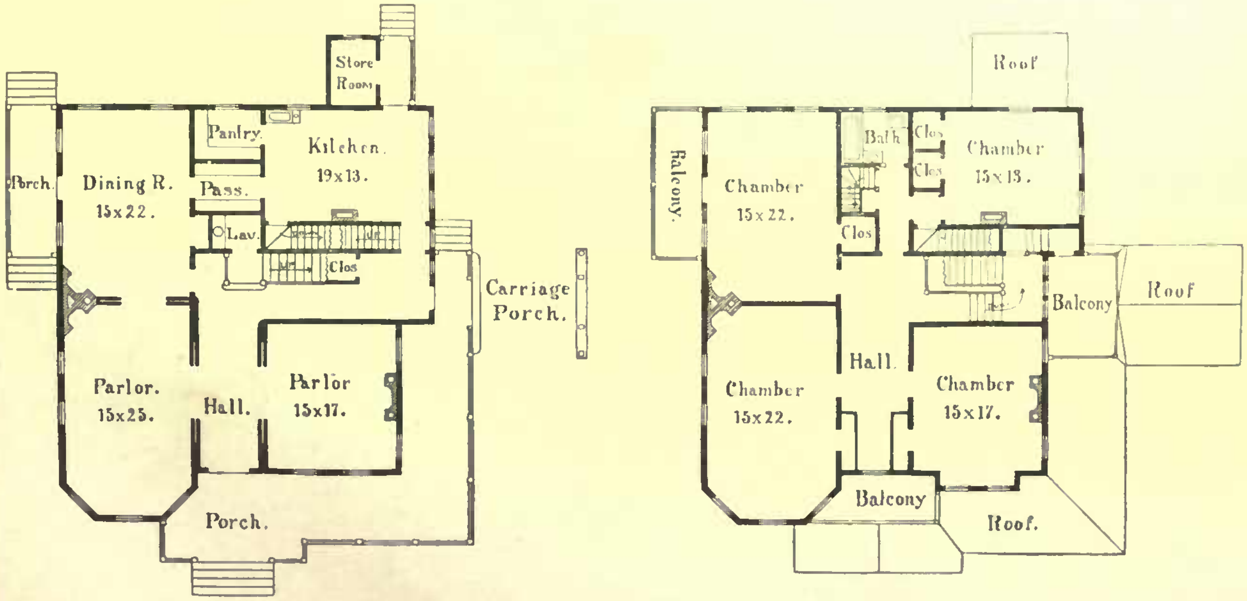

Bed R.
12'x 13'.
Linen.
Bed R.
13'x 15'.
Roof.
Clos.
DOWN
UP
Clos.
Bath R.
Hall.
DOWN
Bed R.
12'x 13'.
Bed R.
13'x 17.'
Clos.
Clos.
Clos.
Clos.
Bed R.
12'x 12'.
Bed R.
12'x 15'.
Bal.
Alcove.
Bal.

Second Floor Plan.

PLATE XXIV. DESIGN 24.

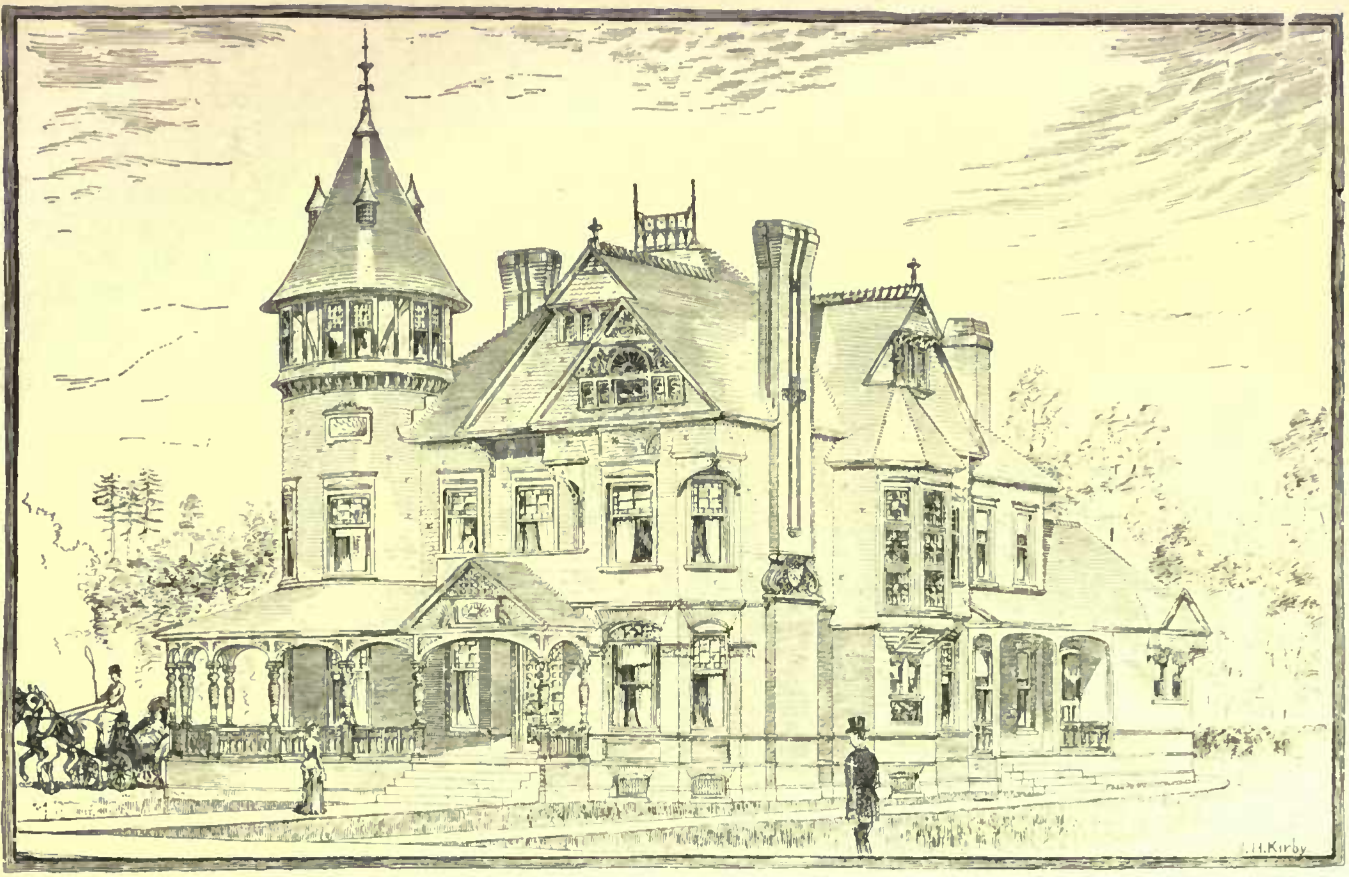


VIEW.


Store Room
Pantry
Kitchen. 19x13.
Porch.
Dining R. 15x22.
Pass.
Lav.
Clos
Carriage Porch.
Parlor. 15x25.
Hall.
Parlor 15x17.
Porch.
Roof
Balcony.
Bath
Clos
Clos
Chamber 15x13.
Chamber 15x22.
Clos
Balcony
Roof
Hall.
Chamber 15x22.
Chamber 15x17.
Balcony
Roof.

Principal Floor Plan.

Second Floor Plan.


J. H. Kirby

VIEW.

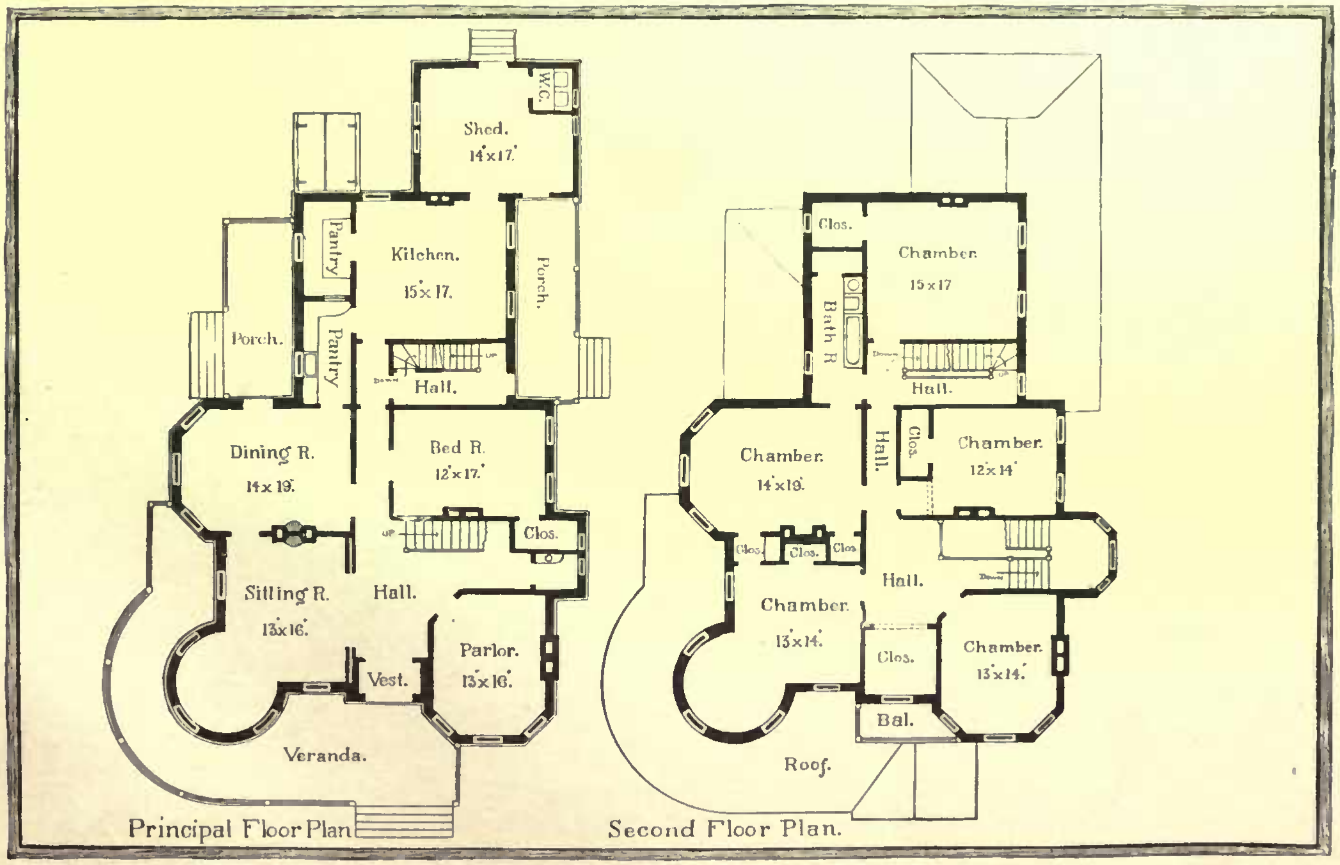
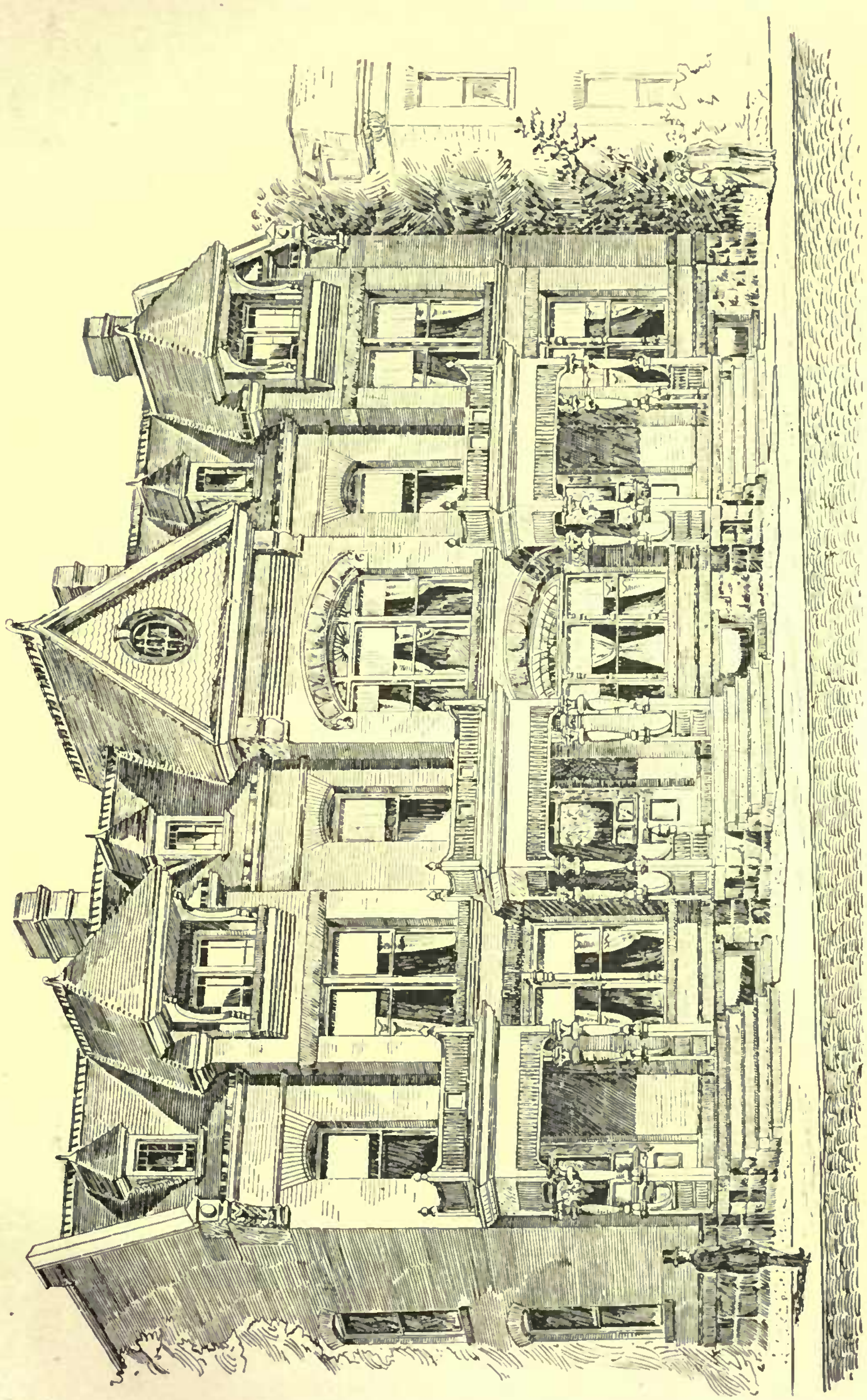
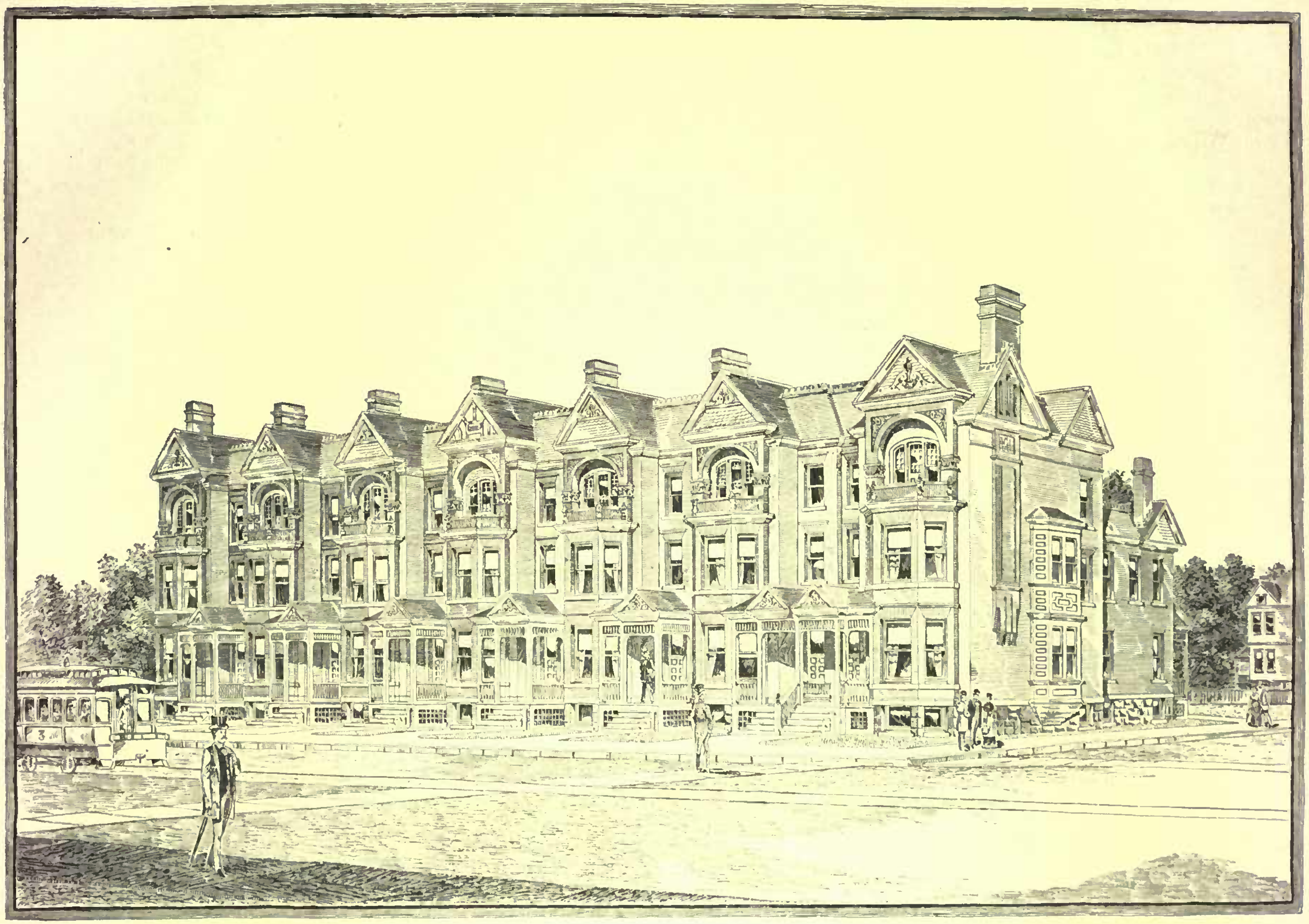

W.C.
Shed.
14x17.
Pantry
Kitchen.
15x17.
Porch.
Porch.
Pantry
Down
Up
Hall.
Dining R.
14x19.
Bed R.
12x17.
Up
Clos.
Sitting R.
13x16.
Hall.
Parlor.
13x16.
Vest.
Veranda.
Principal Floor Plan
Clos.
Chamber.
15x17
Bath R.
Down
Up
Hall.
Chamber.
14x19.
Hall.
Clos.
Chamber.
12x14.
Clos.
Clos.
Clos.
Hall.
Down
Chamber.
13x14.
Clos.
Chamber.
13x14.
Bal.
Roof.
Second Floor Plan.

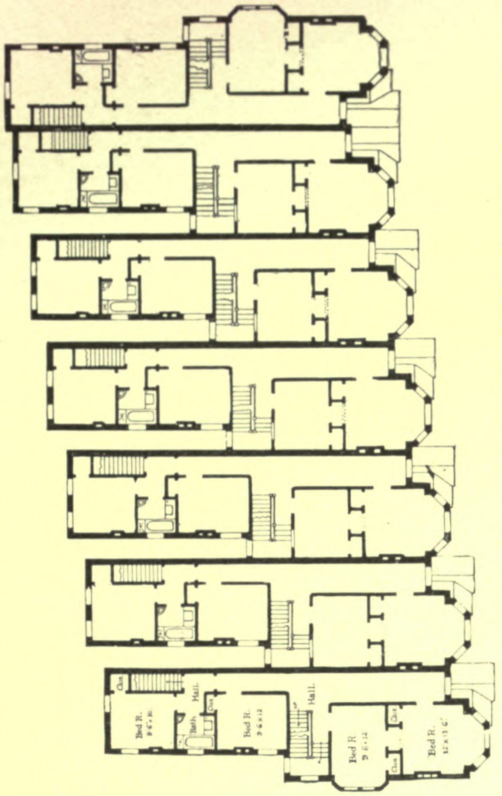
Plate XXVI. Design 26.



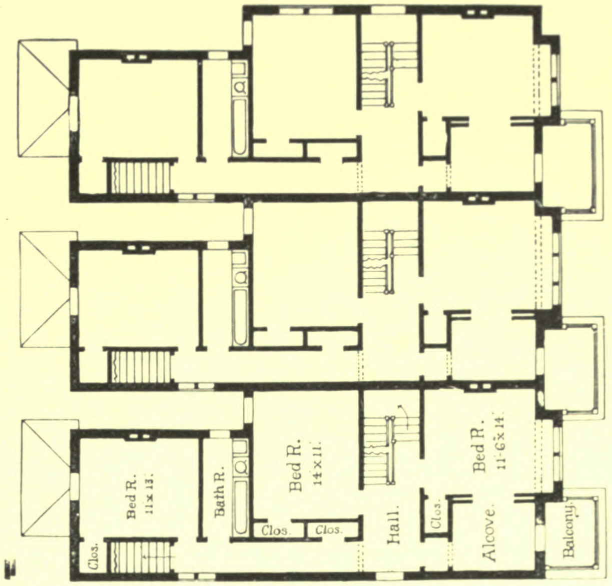
A BRICK BLOCK OF THREE HOUSES. (See Plate XXVIII.)



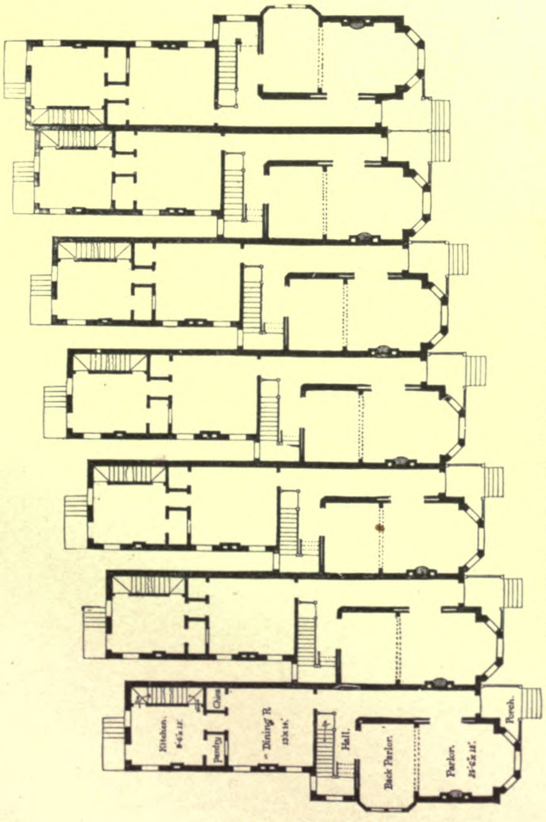
A BRICK BLOCK OF SEVEN HOUSES. (SEE PLATE XXVIII.)


Clos.
Bed R. 9'6" x 10'
Bath
Hall
Clos.
Bed R. 9'6 x 12
Hall
Bed R. 9'6 x 12
Clos.
Clos.
Bed R. 12' x 13'6"

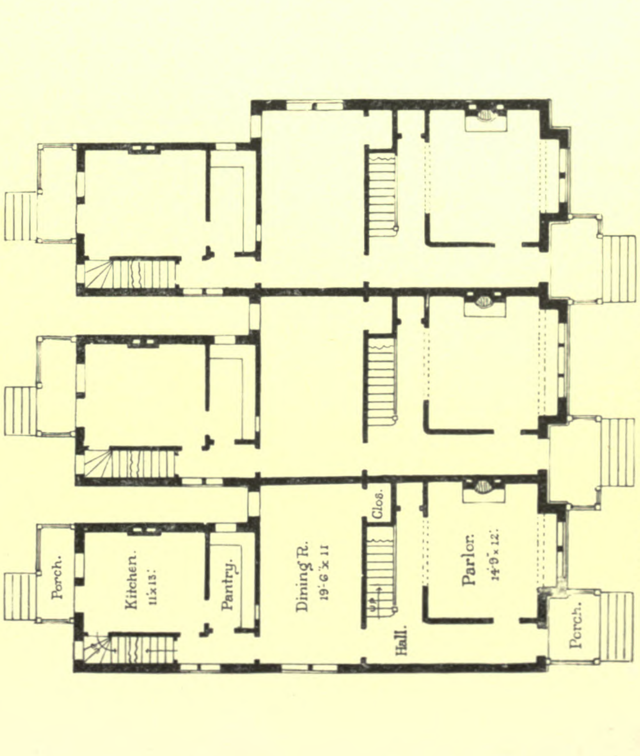
SECOND FLOOR PLANS. (SEE PLATE XXVII.)


Clos.
Bed R. 11 x 13.
Bath R.
Bed R. 14 x 11.
Clos.
Clos.
Hall.
Clos.
Alcove.
Bed R. 11'6" x 14'
Balcony.

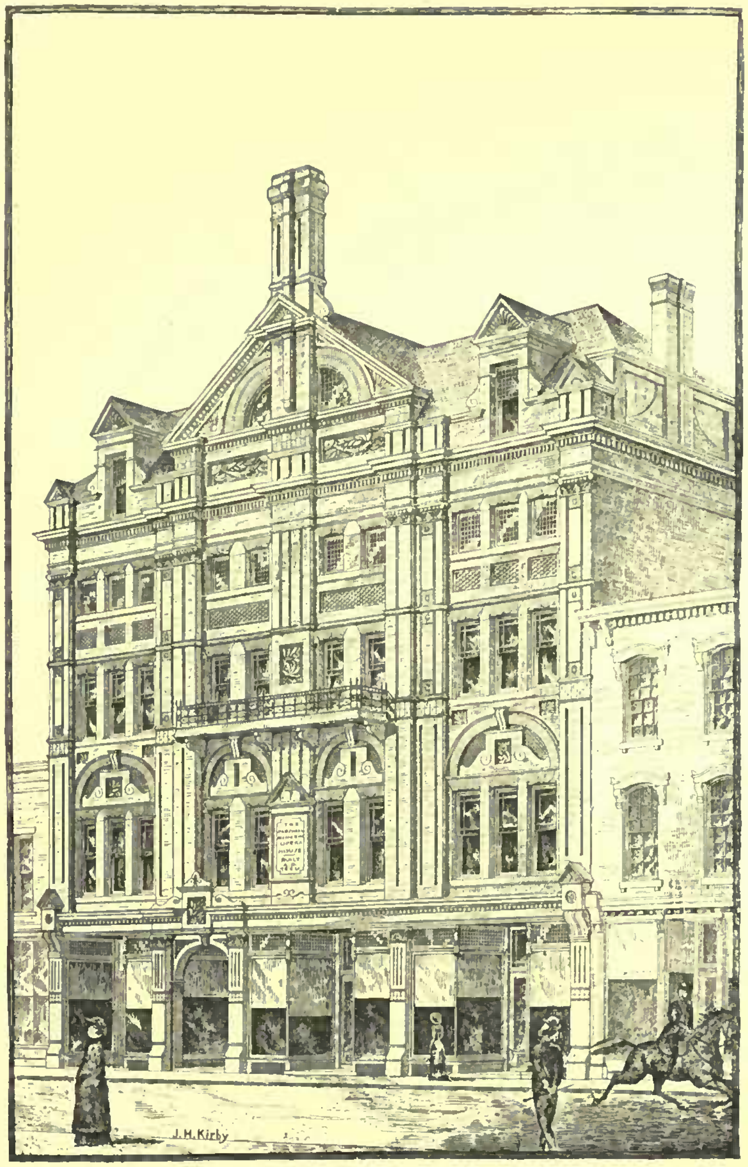
SECOND FLOOR PLANS. (SEE PLATE XXVI.)


Kitchen. 8'6" x 12'
Pantry
Clos.
Dining R. 13 x 16'
Hall.
Back Parlor.
Parlor. 15'6" x 12'
Porch.

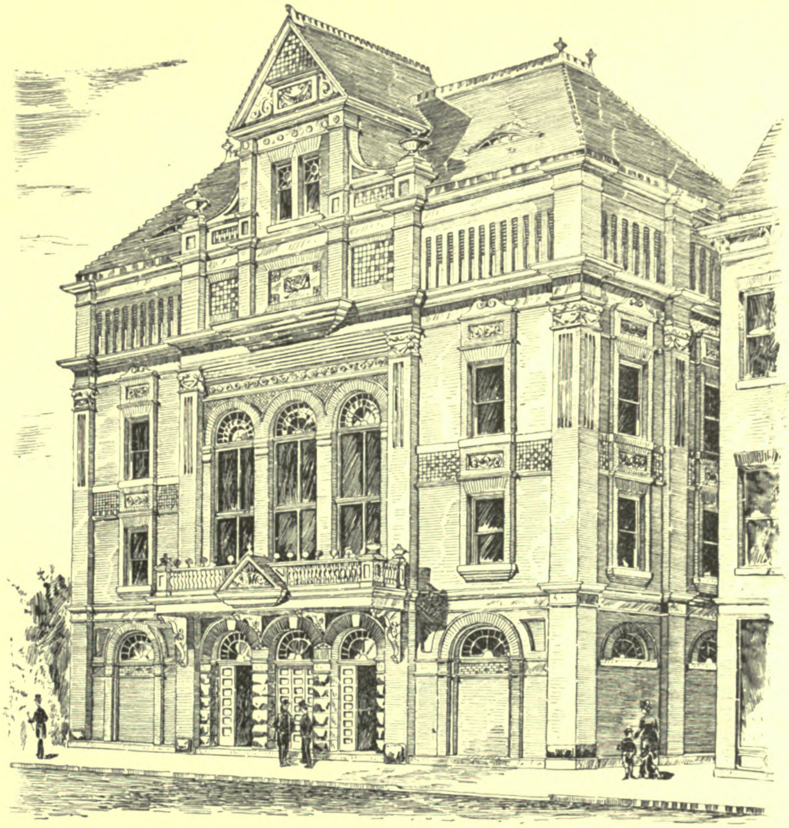
FIRST FLOOR PLANS. (SEE PLATE XXVII.)


Porch.
Kitchen. 11 x 13.
Pantry.
Dining R. 19'6" x 11
Clos.
Hall.
Parlor. 14'9" x 12'
Porch.

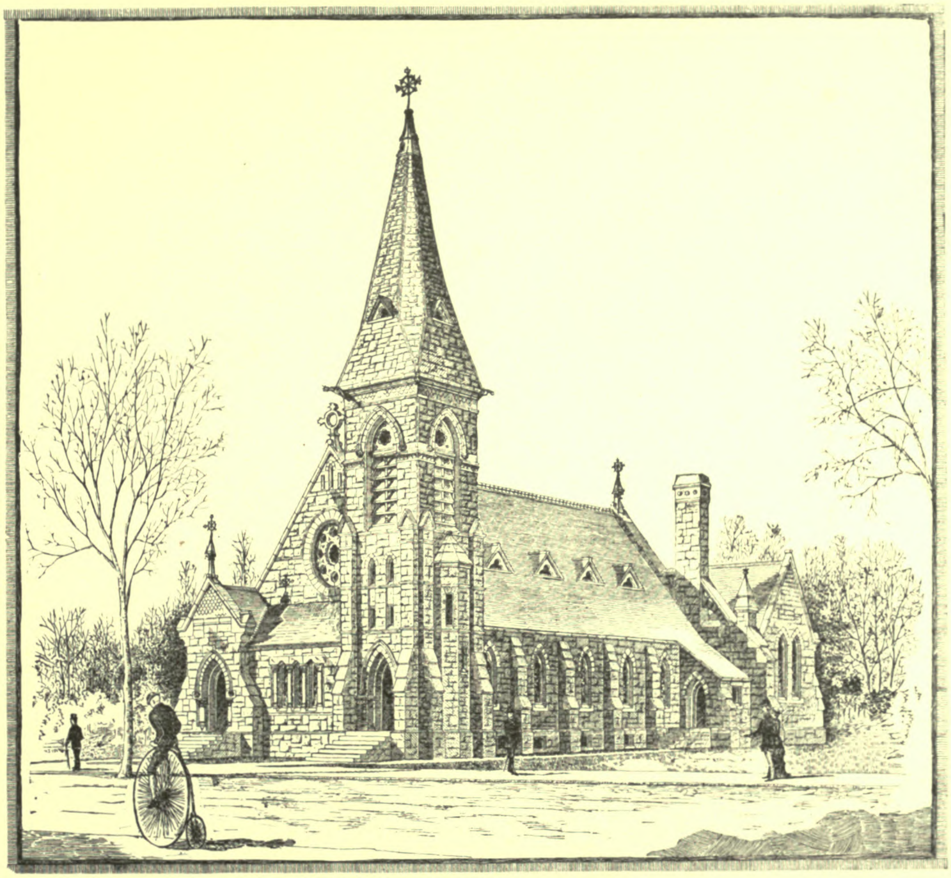
FIRST FLOOR PLANS. (SEE PLATE XXVI.)



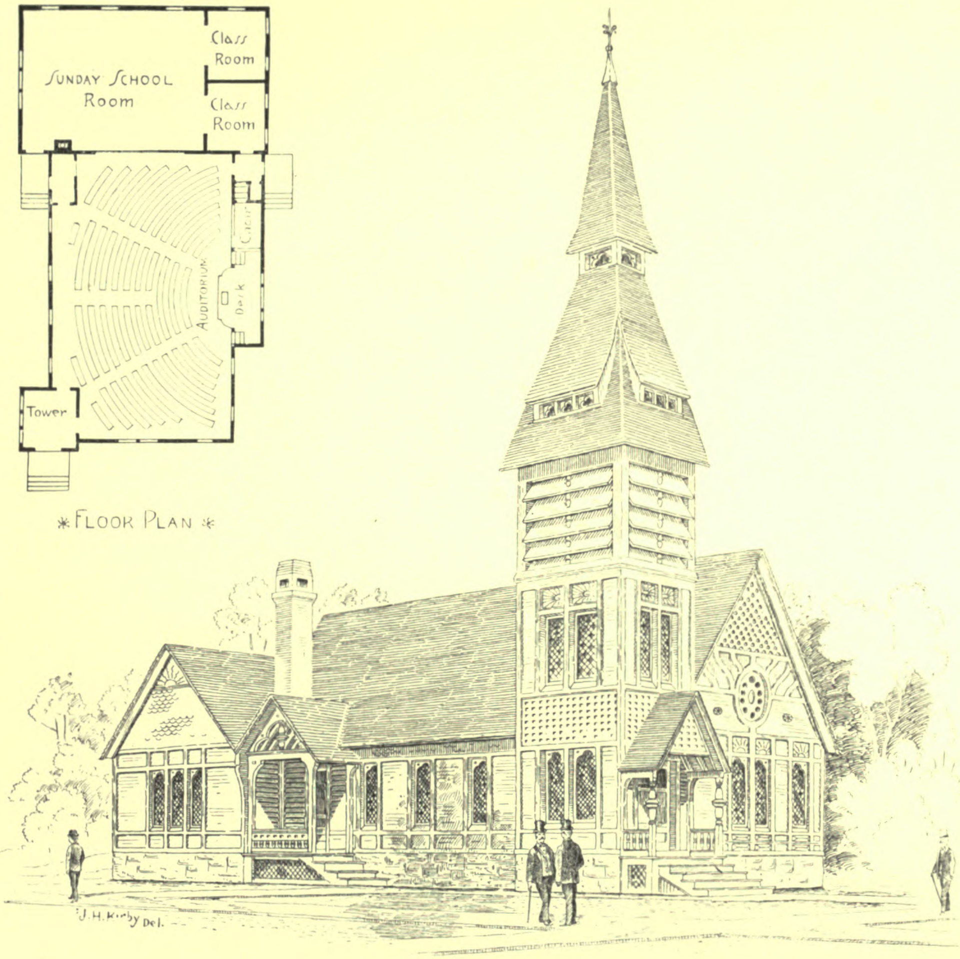
OPERA HOUSE AT LYONS, N. Y.



OPERA HOUSE AT CORTLAND, N. Y.

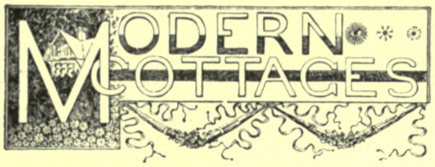


DESIGN FOR A STONE CHURCH.

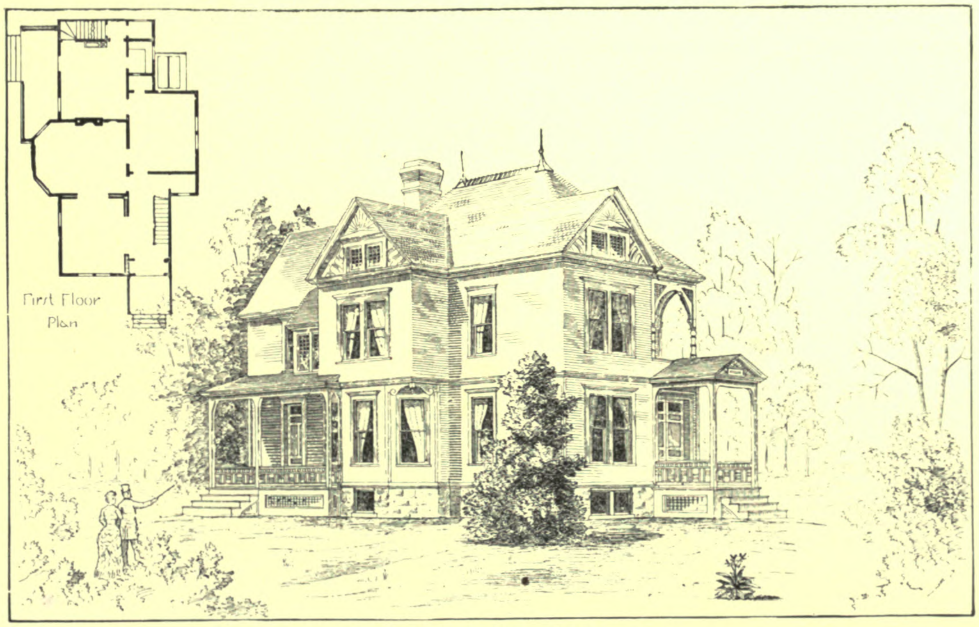

Sunday School Room
Class Room
Class Room
Auditorium
Desk
Choir
Tower
* FLOOR PLAN *
J. H. Kirby Del.

DESIGN FOR A FRAME CHURCH.

HINTS ON THE
Practical Construction of Dwelling Houses.

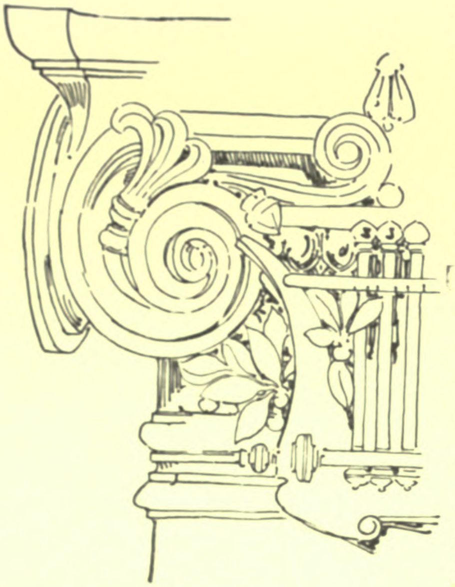


THE first requisite is a suitable site; where practicable it should be so located that the living-rooms of the house will get the benefit of as much sunlight as possible. A slightly elevated lot is best where such can be procured. In selecting a building spot, good drainage should be well considered, and low, damp, malarious localities avoided. All of these things are to be taken into consideration where one can pick and choose, but in many cases people have to take up with sites not altogether desirable; in such cases they must do the best they can with the situation. The placing of the house upon the lot is a point worthy of important consideration; and it is well so to arrange the living-rooms that they will look out upon the approach to the house, if it can be done without interfering with the free admittance of the sunshine into the said rooms.

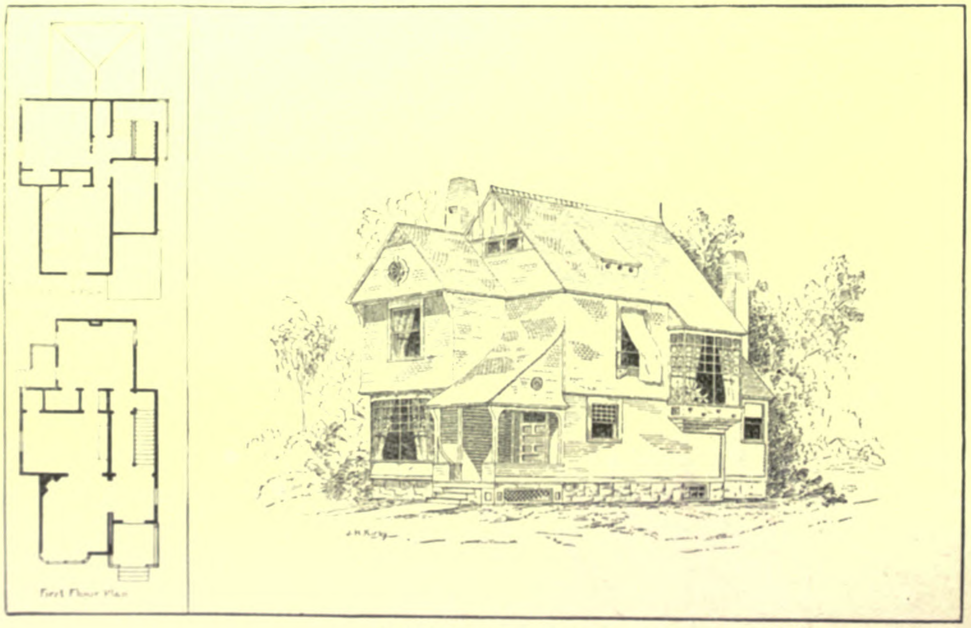


A FRAME COTTAGE

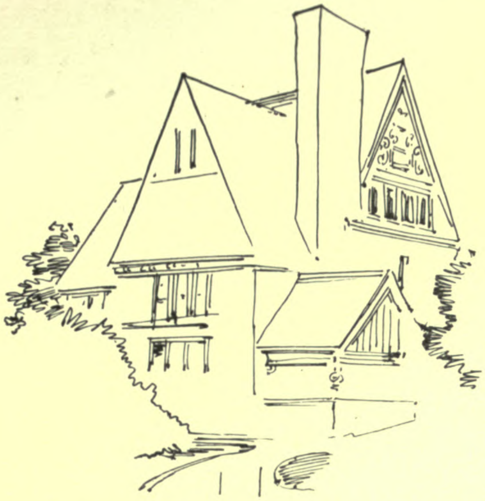
Planning and Arranging.—The planning and arranging of a house is the first and most important step after the selection of the site. The interior is the life; the exterior is the expression of that life. We should build from the interior outward.



The arrangement and position of the rooms should be regulated by the condition of the family which is to occupy the house, the amount of money one wishes to expend, and by any other special considerations which have any bearing upon the subject. Rooms so arranged that they may be easily thrown together by means of sliding doors are very popular. The large hall with its square landing staircase, so much in vogue, the soft, subdued light of stained glass windows, and the fire on the hearth, form attractive features in our modern houses, which are a constant source of pleasure to the occupants. Almost any intelligent person can plan a house, that is, he can indicate by means of lines or otherwise something in regard to the number of rooms he wants and the relation of each room to its neighbors. This, however, is not architecture. Where one can so indicate, by means of a diagram, his supposed wants, it is well enough to do so, as in the event of placing the work in the hands of an architect it will enable him to more clearly understand the idea of arrangement which the owner had in mind, and thus assist him in working up the plans so as to conform with the owner's wishes. Many people, however, leave the entire

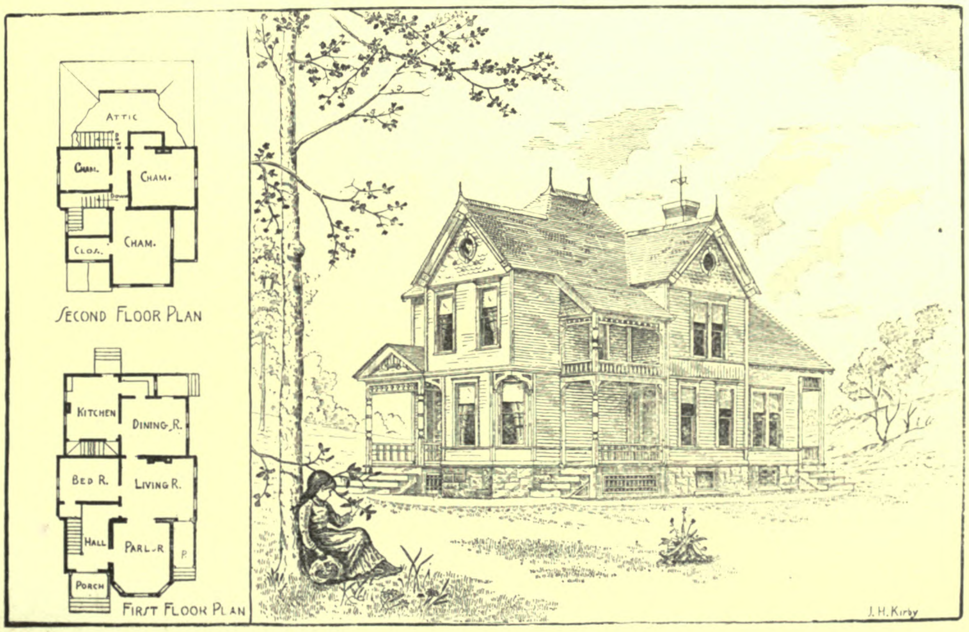


A FRAME COTTAGE.

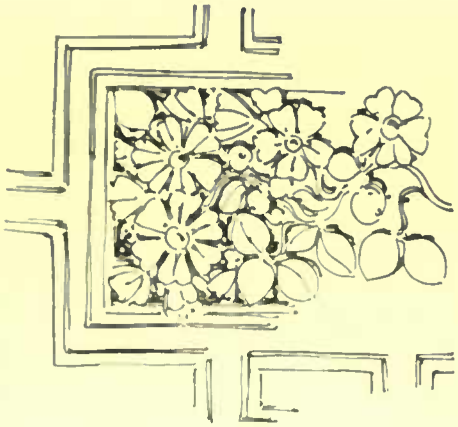


question of planning, with the exception of a suggestion here and there, to the architect, which is generally more satisfactory in the end.

The Foundations and Excavations.—The stability of a house depends upon the nature of the soil to be excavated. A good, coarse gravel bed is the best to build upon; it being uniform throughout, the settlement of the different parts of the building is evenly distributed, thus avoiding cracks in the walls. A good gravel bottom is also excellent, because it is porous and open and easily leaches the water off, leaving the walls dry. A good, hard clay bottom is generally considered desirable, but the walls and cellar bottom are apt to be damp and wet, as clay holds the water and does not allow it to leach off as in the case of gravel. Where a clay bottom exists, it must be carefully drained. A good way to do this is to excavate under the middle of the stone wall, all around the building, a small trench about six inches deep and six inches wide, and fill the same with coarse gravel, being careful to give the trench a fall toward the drain; this will drain off the water which may run down the sides of the walls and collect under the same. The worst kind of a foundation which the builder has to contend

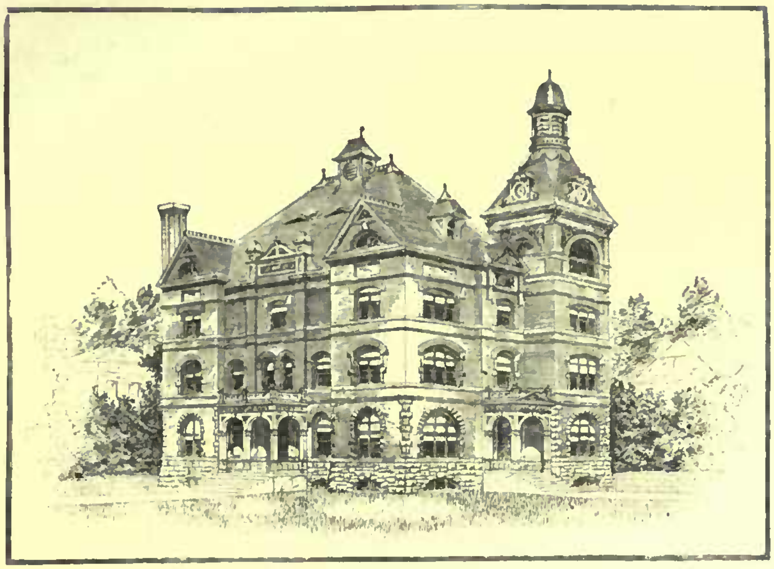


A SMALL FRAME COTTAGE.



with is the quicksand and quickclay foundations. So long as the earth is confined it may do very well, but as soon as the attempt is made to excavate near it, the tendency of the quicksand is to run out from under the wall which it supports. The stuff is treacherous and should be treated accordingly. In the case of a light frame dwelling, a very good and economical way to do, where you have quicksand to contend with, is to lay under the stone wall two-inch planks, three or four feet long, laid crossways and centred with the centre of the wall; on the top of this, lay longitudinally with the wall, other two-inch planks somewhat wider than the stone wall, the whole to be sunk below the cellar bottom. Piles of various kinds are used in soft foundations or in made ground. Where the walls are not too heavy, 2 x 4 scantling may be driven down to the depth of about five or six feet under the wall, placed about one foot apart diagonally; on the top of these piles lay a bed of cement concrete from six inches to one foot high, and about one foot wider than the stone wall resting thereon. Concrete can always be used to good advantage in soft foundations. The bottom may be planked as described above and concrete footings, say three feet wide by one foot high, built on top of the plank. Concrete may also be used alone, but care must be taken to adapt the height and width of the footing to the weight of wall to be sustained. These remarks are intended to apply only to dwelling houses, either for brick or wood. In case of heavier buildings the quantities must be increased. The excavations for the cellar should always be dug larger than the dimensions for the wall indicate: anywhere from six inches to two feet. This will enable the mason in building the cellar wall to thoroughly point and plaster the outside surface. This should be done to prevent dampness in the walls. It is also desirable to lay from four to six inches of concrete against the outside of the cellar wall and extend the same a little lower than the cellar bottom and slope away from the house a foot or more. At the termination of this slope lay a drain of agricultural tile and fill in against the wall with coarse gravel, about six inches wide. This method will carry off all the surface water and leave the cellar walls perfectly dry on the inside. These precautions for the prevention of dampness and moisture are rarely taken and hence the unwholesome condition of most cellars.

Stone Walls.—Every house should have a good stone wall, built of suitable quarry stone. All stone should have good, flat beds and square edges. The large, flat stone should be laid at the bottom, and all stone should be well and thoroughly bonded together. In the case of brick buildings, and also of large frame buildings, it is best to lay a footing course one foot wider than the walls resting thereon and



A HIGH SCHOOL.

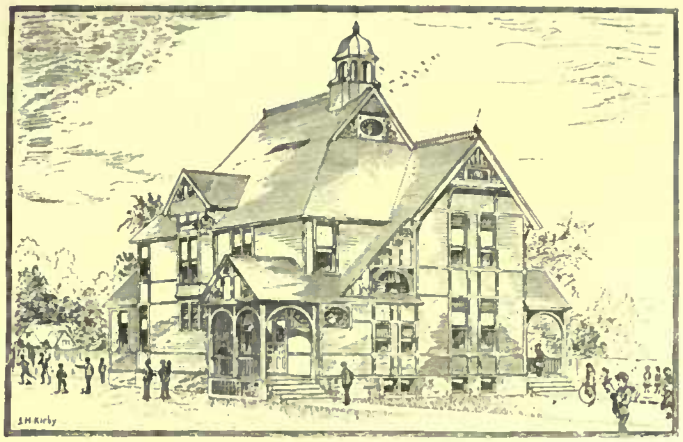
six or eight inches high, well bedded in from two to six inches of cement concrete. If the wall is eighteen inches thick, or more, the stones should not pass entirely through the wall, as the frost will follow the stones through to the inside. All of the stones of which the cellar wall is composed should be laid in cement mortar, made of one part water-lime and three parts coarse, sharp sand. Each layer of stone should be well filled up and the face of the wall pointed on both the outside and the inside. Good, sharp sand only should be used, and care should be taken to select that which is free from dirt and loam. No mason can make good mortar from poor materials, and to secure a good wall it is essential that all of the materials used shall be of the very best quality. The face of walls above the grade can be laid in a variety of ways. Perhaps the most economical way is to lay a "rubble wall." This method admits of laying the stone as they come from the quarry, and letting the fresh quarry faces show, without being touched by tool or chisel. The joints are laid in a random fashion and neatly pointed. Another common way of laying face walls is what is known as "tool-hammered and mixed work." The face of the stone is marked with dots or tool-marks and brought to a level suface; the joints are laid out of range with each other. The most artistic way of treating the face walls is to make them "rock-face": the face of the stone shows projecting rocky parts in the centre, and the edges or joints are "pitched" down to a level line all around; the beds of the stone are dressed so as to make close joints. The joints are treated in the broken range or random style. There are many other ways of dressing the stone for face walls, but these are the most in use for dwelling houses.

Brick Work.—The treatment of brick work in our modern buildings has come to be a work of art in many cases. The fine bricks made by the Philadelphia, Trenton, St. Louis and Chicago companies, are among the best in this country. These bricks are a deep red color, are made in many shapes and styles, and when laid up by skilled "front brick" layers the results obtained are most pleasing and satisfactory. The outside surfaces of walls only are laid with the best pressed bricks, and the

SMALL STONE CHURCH.

interior walls are backed up with well burned, common bricks. The joints of such work should be laid close, in red, black, or brown mortar; the red mortar joint is usually preferred by architects, as the individuality of each brick is lost in the massing effect of the whole. In laying up walls of common brick, many things must be considered in order to produce good, substantial work. All the bricks used throughout should be good, hard burned bricks, laid in regular bond, that is, one joint should be alternately over another. For the face work, stretchers are used, that is, bricks laid lengthwise and bound in every sixth course. The mortar used should be good quicklime mortar, made of good lime and clean, sharp sand. A good result will be obtained by laying all brick piers and walls in cellars with water-lime mortar. Where fireplaces are required in dwelling houses, or elsewhere, it is well to notice if the plans provide for brick supporting arches for the hearth. The carpenter will see to it, in such cases, that the trimmer is framed the required width of the hearth away from the chimney breast, which will admit of turning the arch between the chimney and the trimmer. In frame dwellings, it is desirable that the spaces between the joists and on top of the cellar wall and under the floor should be "beam filled" with brick all around the building; the spaces may be filled in solid, or one row of brick may be laid on top of wall close up to the house sill. This precaution should be taken to keep the wind and cold from penetrating under the sill.

Chimneys.—Start your chimneys from the bottom, build them upon a solid foundation and do not attempt to set them upon stilts. All flues, when possible, ought to be carried to and open into the cellar, so that at any time they can easily be cleaned out. If the mason will be very particular, it is best not to plaster the flues on the inside, but flush up the joints neatly with the trowel. It is important that no holes or interstices are left in the flues, as they arrest the smoke in its upward flight and cause the gases to lodge in them, thus producing creosote. The mason can easily make the flues smooth by plastering them, and hence this is quite the custom among the craft, but after a time a bit of mortar may drop off here and there, forming interstices as above referred to. On the other hand, where the joints are neatly and cleanly struck, there is nothing that can fall off, and the flue always remains the same. A smoke flue for the furnace, or other heating apparatus, is usually carried



A SCHOOL HOUSE.

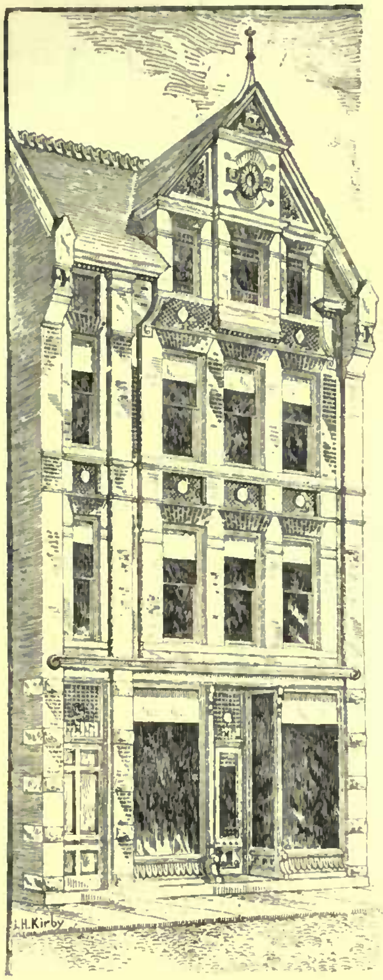
up independent of all other flues. The topping out of chimneys is a fruitful subject for consideration; one tendency is always to get them too low; another tendency on the part of the ambitious builder is to get heavy excrescences on top, which weigh them down and soon cause them to fall apart. A simple topping out is always best and a capstone should be placed on top, or the flat part on top plastered with Portland cement about two inches thick. In warm, dry weather, see that the bricks are kept thoroughly wet, as the mortar adheres best by being applied while the bricks are damp.

Terra Cotta.—The use of terra cotta in brick work is rapidly gaining favor among people generally; being made of the same materials as fine bricks and being of the same color, it blends and harmonizes with them, while at the same time the terra cotta panel stands out in relief from the plain brick background. The possibilities of this material in the hands of the skillful manipulator are various, and the results produced by a really good artist in modeling are most pleasing. The uses to which terra cotta is put are many. It is used largely for exterior ornament in brick work, for the facings around fireplaces, for chimneys, for mantels, hearths, medallions, and for various other purposes. Designs are frequently chosen by the owner or architect directly from the Company's catalogue. The better way is for the architect to make some design especially fitted for the place it is to occupy, working the study out in detail, and send it to the Terra Cotta Works to be modeled. Plenty of time should be given the makers, as the burning is a slow and careful process. All terra cotta work should be set in Portland cement.

Plastering.—Unless the mortar is well made and properly applied to the walls, the results are perhaps as annoying to the housekeeper as anything that usually occurs in the ordinary calendar of mistakes, unless it is leaky roofs. It is, in the first place, essential that the sand should be clean and sharp, free from dirt or loam. A very good way for determining the best quality of sand, is to take up a handful and squeeze it together, in doing which, however, the sand must be perfectly dry; if the sand falls apart immediately on opening the hand, you may know that the sand is free from dirt, or comparatively so. A practical eye can tell at a glance the good from the bad. The appearance of several grains of sand examined through a large microscope will be that of a number of small rocks lying as close to each other as their rough and ragged sides will permit; if there is apparently no earth between

them the sand is clean. The surfaces of these apparent rocks will appear like large quarry stones, the edges of which have been broken with the stone hammer, leaving all sides crisp. When good lime is added to such sand the adhesive properties are great. Quicksand is bad, and therefore must be avoided. Take several grains of quicksand and examine them through a powerful glass, and the result will be a number of apparently large field stones lying close together, the surfaces of which are comparatively round and more or less smooth. The adhesive effect of a lot of such stones placed together would be equal to a lot of wheat suddenly let loose from the bin where it had been confined. The next ingredient in the preparation of good mortar is good lime. The lime obtained from the burning of limestone is used almost altogether in many parts of the country ; lime so made contains a great amount of heat, and, therefore, it must be thoroughly slacked before being mixed with the sand. When small pieces of lime are left unslacked, or undissolved, and so find their way into the mortar, the result will be that the heat will find its way out of the lump of lime. Sooner or later the latent heat in the lump of lime will cause it to burst, thus occasioning the "pitting out" which is so annoying and unnecessary. To avoid this unpleasant result, every piece of lime should be thoroughly dissolved before being mixed in the mortar. To this end all lime should be worked through a fine wire mesh sieve ; in this way all lumps will be removed beyond a doubt. Good lime is also made from shells. Such lime is cooler and more easily manipulated. The first coat of mortar applied to the wall is known as the "scratch coat," so called from its being marked or scratched by means of a sort of wooden comb, and frequently a broom is used. This is done to cause creases or indentures, so that when the second coat is applied it will the more readily adhere. The "scratch coat" should be left until it is nearly or quite dry before putting on the second coat. This method is called brown finish. Frequently a third coat is added to the walls, which is put on very thin, and is called a putty, or skin coat. White, hard finish, is applied this way. Soapstone finish is also used, and is good if the walls are not to be papered. In all well built houses the plastering should be carried below the grounds to the floor, and also behind all wainscoting. This prevents the wind from finding its way through the wall.

Plaster Cornices.—Stucco or plaster cornices and centre pieces are not used as much at present as they were formerly, and when used do not take on the massive proportions which characterized them when they were so fashionable, the members and the whole cornice being much more delicate. This is especially the case in houses of moderate cost, as there are so many ways of decorating ceiling, frieze and wall, with paper hangings, which are comparatively inexpensive and yet entirely satisfactory.

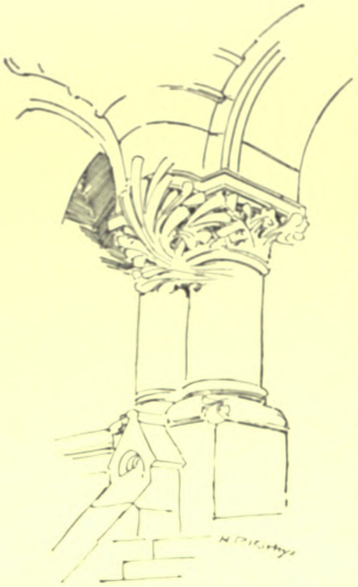


STORE AT LYONS, N. Y.

Cellar Bottom.—Every well built house should have a good cellar bottom, which should be packed and settled thoroughly and covered with cement concrete, four to six inches deep, composed of three parts of clean, coarse, sharp gravel and one of good cement, and the entire surface flushed up even and true. Around the sides of the main walls gutters should be formed sufficient to carry all the water to the drain. Over the mouth of the drain an iron hopper, with strainer, should be placed, and the whole job left in perfect condition.

Cistern.—A good, strong, tight, commodious cistern is one of the necessities of a well appointed house. It is desirable that it should be inside the cellar, to prevent the water from freezing in winter. It should be built of good quarry stone. The walls should be not less than eighteen inches thick, well bonded, and laid up in water-lime mortar. The interior walls and bottom should be lined with a four-inch hard brick wall, and arched over the top with same, the whole to be plastered on the inside with water-lime mortar and Portland cement, in the proportion of three parts water-lime to one of Portland cement. The last coat should be put on in *pure Portland cement*, in order that the water may be soft; as water-lime renders the water hard, it is important that there should be no water-lime in the last coat. Portland cement as a finish also insures the cistern being perfectly tight. A filter may be built in the cistern, with satisfactory results, in the following manner: build a four-inch brick wall across one corner, or one end of the cistern, to the desired height, the joints to be laid tight in water-lime mortar, and allow the water to filter through the brick. Of course the brick are not to be plastered on their faces. A dome filter built in a like manner in the center of the cistern is also good. It will present the appearance of a bushel basket of larger dimensions. This arrangement admits of the water pressing equally on the top and all sides at the same time; it also has the advantage of not being joined to any other wall to cause any leak.

Iron Work.—In the case of brick buildings, it is well to see that all necessary iron and blacksmith work is furnished and done to make all places substantial. The joists, in all cases, must be anchored to the brick walls with good, strong wrought iron anchors, placed firmly in the wall, at distances not over six feet apart. All

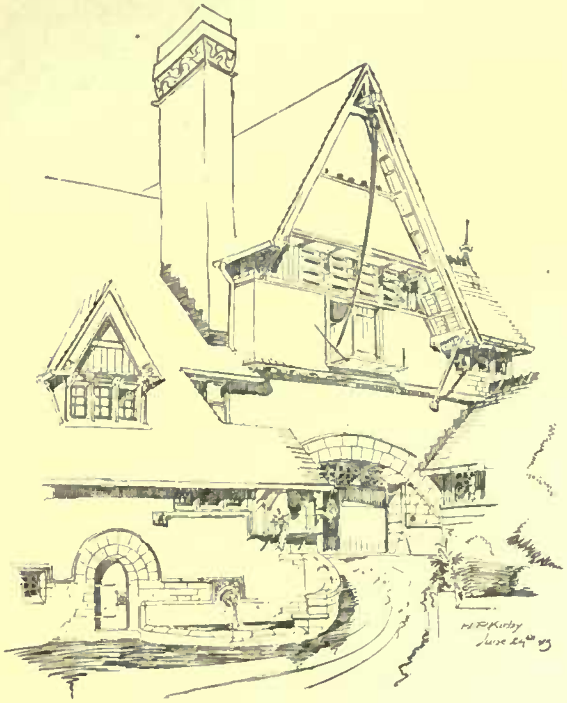


necessary iron rods should be furnished for braces to all chimneys where needed, and all bolts, truss rods, etc., where required by the plans.

CARPENTER WORK.

The Timber.—It is of importance that the timber, that is, all that constitutes the frame work or skeleton of the building, should be of good, sound, dry material, of hemlock or spruce, sawed perfectly square, and of the proper sizes given in the architect's specifications. All timber must be free from shakes, sap, dry-rot, and all other imperfections impairing its durability.

The Frame.—Under this head will be considered the entire structural requirements of the building above the foundation walls. The first piece of timber to be used is the sill, which will be equal in height to the width of the joists; that is, if the joists are 2 x 10 inches, the sill should be ten inches, and six or eight inches wide on top, and the top of the joist and the top of the sill should be flush, or even with each other. The joists must be framed into the sill and both joist and sill will rest alike on the stone wall and have an even bearing. When the sill is placed in position on the stone wall, it should be thoroughly bedded in mortar all around the building, to keep out the wind, and also to bind the sill to the wall. The next timbers to be placed in position will be the girders. Supposing the piers to have been built in the cellar for their reception and support, the girders are then placed upon them with the top of the girder even or flush with the top of the sill. The joists are then placed in position, level with the top of girder and top of sill. The girders should be 8 x 10 inches and the joists framed into it with double tenons, and all joists should have the crowning edge placed upward. The studs are next raised to the height of the first story and capped with a girth 4 x 4 inches. The interior supporting partitions are likewise treated in the same manner, and the floor joists for the second story are placed upon the girth. In like manner the second story is raised, having a bearing on the girth all around the building and on the plate on the interior partitions, and the whole system of studding capped on the top of the second story with a plate 4 x 4 inches, ready for the reception of the rafters. All outside studding will be 2 x 4 and all inside bearing partitions will have 3 x 4 studs. The common practice among builders is to thoroughly nail the studs to the sill, girth, girder, etc., and where possible, to nail all joists to the studding. Before going further with the frame, the prudent builder usually puts on the sheathing, which is composed of matched pine or hemlock boards, one inch thick, tongued and grooved, and not over eight inches wide, placed on the frame horizontally, and thoroughly nailed. This is done for the purpose of making the



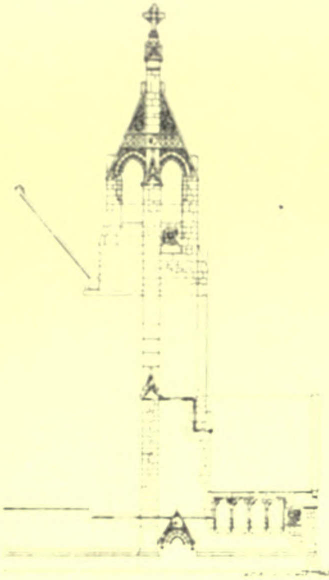
A STABLE.

house warm and also to strengthen the frame work.

Roofs.—After having progressed thus far with the frame work of the building, the next thing in order will be the placing in position of the rafters. All of the rough carpentry necessary to form the projection of the eaves as required for all cornices, gutters, etc., will now be in order. The rafters are then ready for the roof boards, which should be of good hemlock, spruce, or pine, ⅞ inch lumber, laid close joints. Matched lumber is best for this purpose, as it is better to keep the wind from finding its way through the crevices. After having carefully lined the gutters with a good quality of tin, the shingles, slate, or tin, should be put on, after all the cornices are in position. Where shingles are used it is better economy to use only the best: the same will apply to slate, or tin.

Window Frames.—The window frames ought, by this time, to have been constructed and ready to be nailed up in position. All window frames must be constructed in accordance with the working drawings for same, and must be provided with axle pulleys and pockets and made for weights. The cellar windows should be made with two-inch plank jambs. Should dormer windows be used, they must be constructed as per working drawings for same. All manner of window frames connected with the building should be made in strict conformity with the various drawings for the same, and nailed in their places.

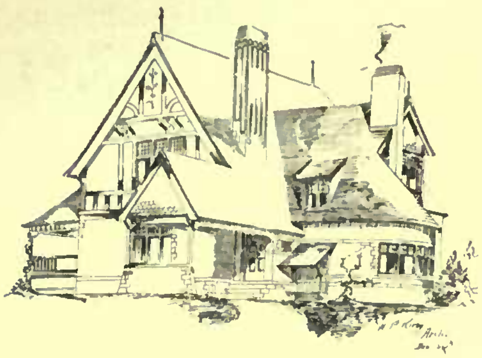
Building Paper.—Before putting on the siding the building paper should be carefully placed on the sheathing. Care must be taken to see that all joints are well lapped, and the paper must be placed behind all window and door casings. The quality of paper used should be two or three ply, selected from some of the many excellent papers manufactured for the purpose. Good results are obtained by nailing furring strips of lath on the outside of the paper and on each stud : this not only firmly fastens the paper, but forms an air chamber between the siding and paper ; when this is done, the carpenter must also furr out the window and door casings with laths, and the details for the window frames must also be made in view of the same. The sidings can now be put on, and of these there are many kinds. The old-fashioned clapboards are the most familiar to most of us. These are usually sawed six inches wide, slightly tapering, about one-half inch thick on one edge and three-



eighths on the other, and laid about five inches to the weather. Cove siding is the term usually applied to several different forms of rabbeted siding. This kind is made seven-eighths of an inch thick. Narrow clapboards are much preferred by architects at the present time and are more delicate in their effect than any other kind. These are sawed somewhat tapering and are laid three, or three and a half inches to the weather. All of the lumber used in all manner of exterior finish, such as cornices, bands, casings, sidings, verandas, etc., should be composed of good, clear, dry lumber, free from sap. When the building has progressed so far, that is, when the roof is on and all of the window frames set, all the sheathing and siding on, then the builder usually turns his attention to the setting of all partitions on the inside and to getting the building ready for plastering.

Partitions.—All partitions throughout the building must be set according to the plans. Bearing partitions on first floor must foot upon the girders below, and be capped on second story with plate for receiving joists. Bearing partitions on the second story to foot upon plate. Partitions supporting tank to be substantially trussed and braced. The studs at angles to be thoroughly spiked together before being placed in position. All doors and other openings must be thoroughly trussed over the top. All partitions must be sized to a straight-edge. Joists, in all cases, must be doubled up under all partitions. Grounds must be put on for finish throughout the building. It is very important that the builder should give his personal attention to the setting of the partitions, to see that all studding, joists, etc., are plumb, level and true. If the carpenters do not make the walls and ceilings true in setting the timber, the lathers are quite apt to put the lath on uneven places, and in their hurry to lathe as many yards as possible in a day, do not always give as much attention to straightening the walls and ceilings as they should. Many of the crooked places are not perceptible until the decorators are through with their work.

Floors.—After all the main or bearing partitions have been set, then all the floors throughout the building should be laid, the other partitions to be set afterward. It is necessary before laying any floors to see that all joists are leveled to a straight-edge. The kind of floors in common use are composed of white pine, seven-eighths of an inch thick, tongued and grooved, not over four inches wide, all well and secret nailed to each joist. A good quality of stock lumber is all that is usually required for such floors. There is no objection to a good sound knot occasionally, providing the floors are to be covered with carpets. Norway and Georgia pines also make excellent floors. White maple for kitchen and dining-room floors is much used and is very satisfactory. Hard wood floors, in strips two and one-half to three inches wide,

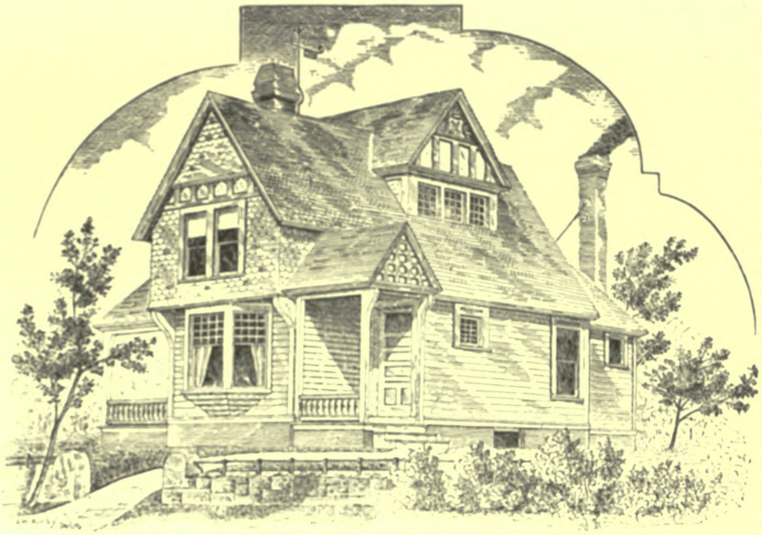


are nice and do not shrink much. If more elaborate floors are required they can be laid with borders of various designs, and with centres plain or otherwise. The owner should determine whether he will have any hard wood floors or not, before the plans and specifications are drawn, so that if hard wood floors are used a common pine floor can be laid down first. Where hard wood floors are to be laid the joists should be placed the thickness of the floor lower, so as to admit of the laying of the common pine floor first. All flooring used throughout should be well kiln-dried. The floors for porches or verandas are usually laid with White or Georgia pine, one and one-quarter inches thick, and about three inches wide, and the joints should be well painted as each piece is put down. All hard wood floors should be laid after the plastering is finished. At this stage of the building the lathing and plastering would now be in order (see plastering).

Interior Finish.—After the plastering is thoroughly dry the finished work can be put up and the house cased throughout. If the house is of moderate cost the finish must be plain and simple, and the architect in making the working plans for the same must use his judgment as regards the expense. In the designing of casings, bases, wainscoting, stairways, etc., much can be done to give character and expression to the interior without extra cost. All of these things, however, depend upon the taste and training of the designer. White pine finished in the natural wood is much used and makes a pleasing finish. Whitewood is very popular, finished in the natural wood, and whether finished in the natural color, or stained to imitate cherry, is very effective. Cherry also makes a beautiful finish, but the cost is much greater than that of the two former woods. If elaborate finish is required, quartered oak, California redwood, Georgia pine, walnut, etc., work up elegantly. Where pine is to be finished in the natural wood it is necessary that it should be clear, dry and free from sap, and more pains should be taken in the selection of the lumber than if it were to be painted.

Sash.—The sashes are to be fitted as soon as the floors are laid. Sashes made for common glass are usually one and one-half inches thick, but should plate glass be used they should not be less than one and three-quarter inches in thickness. The size of the sash is determined by the size of the glass, as is also the size of the window frame. It is customary for the architect to figure the size of the glass upon the plans, as then the carpenter knows just how much larger the window frames are to be made to have the sash fit. The cellar window sash should be hung on back flaps and secured with hooks and staples.

Glass.—There are many kinds and grades of glass, from the common single

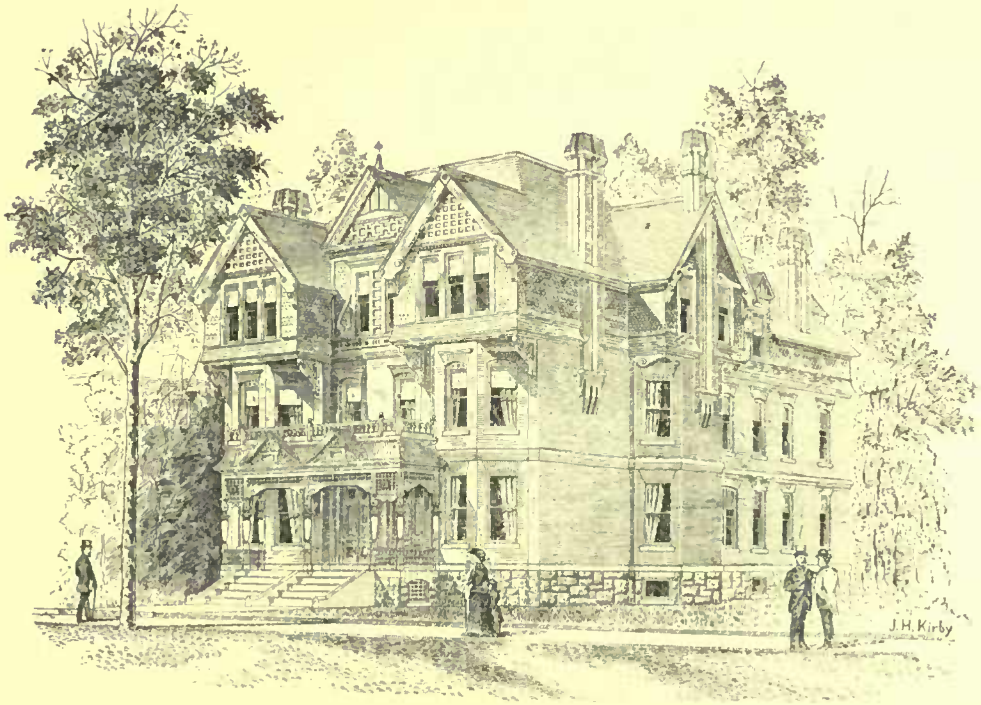


A SMALL FRAME COTTAGE.

thick to the finest polished plate. It is not the best economy to use the cheaper grades of glass. There is probably no other one item which adds so much to the pleasant appearance of a house as fine plate glass; if it is not expedient to use it in all of the windows, it can be put in some of the windows which command the principal outlook from the living-rooms. The use of stained glass in our modern houses has come to be, in most cases, a matter of course. It is better to use only a little stained glass and have the best you can get, than to use large quantities of cheap glass. Cheap stained glass has a tawdry effect. The design must be good, the colors well chosen and in harmony with the general surroundings of the place, or it had better be left out and plain glass put in its stead.

Doors.—All doors throughout should be made to conform strictly to the specifications and working drawings for the same. Where sash doors are required by the plans they should have proper rebates for receiving the glass, and suitable provision for same with beads, etc. The size of doors for width, height, etc., are usually marked on the floor plans. All necessary dwarf doors should be provided, when needed, for all pantrys, closets, wash stands, etc. All outside and inside cellar doors and all hatchway doors should be made of two thicknesses of seven-eighths ceiling boards hung on strong plank cased frames. If mill doors, or doors of a stock pattern, are required, it should be clearly and definitely set forth in the architect's specifications; on the other hand, if special doors are required, the architect's drawings should show them in detail. All hard wood doors are made veneered, that is, of three thicknesses of wood, the centre piece being of pine, which prevents the doors from warping. Sliding doors should not be made less than one and three-quarter inches thick, and hung at the top with good and approved sliding door hangers. The pockets, or spaces, into which the doors slide, must be cased or ceiled up with one-half inch tongued and grooved boards, and otherwise boxed in perfectly tight, in order to secure the best results. Where the sliding door partitions come next the outside walls it is necessary to see that that part of the wall is made as warm as any other part. If the wall is left unfinished at this point much cold will find its way into the room. This precaution is often neglected because the place is out of sight and, therefore, not apt to be noticed.

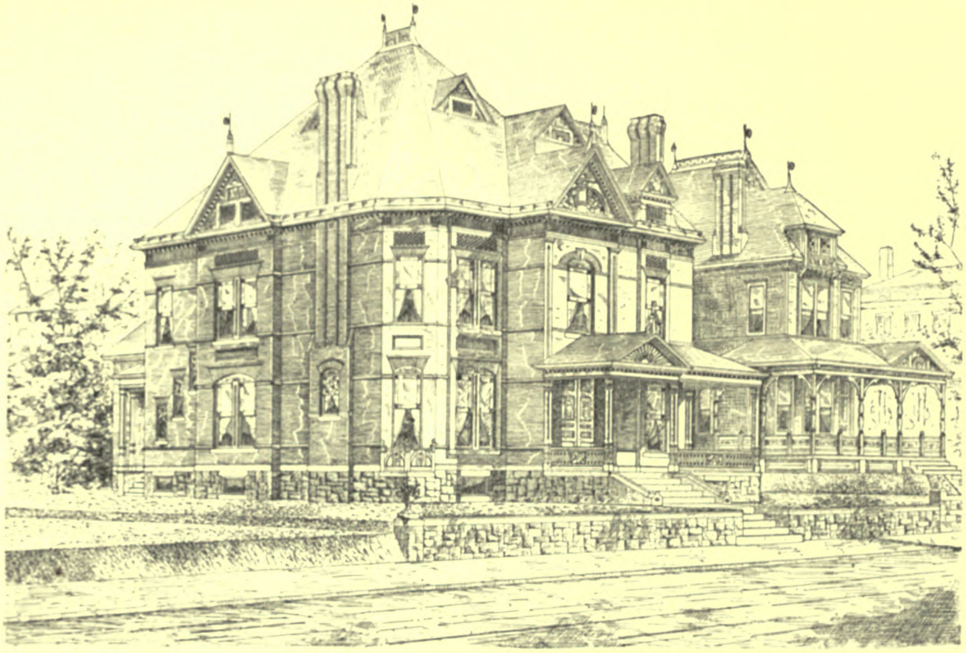
Door Trimmings.—Modern door trimmings and builders' hardware generally may be classified under the head of industrial art. Much ingenuity, good taste, and inventive skill having been bestowed upon this art, the results are quite elegant and artistic. In approaching or entering a house, the things which first attract the attention are the front door trimmings, particularly the knob, roses, etc. A nice bronze knob should be used on the front door if on no other door in the house. Money spent on good trimmings is always satisfactory in the end. Each door throughout the house should have a good mortice lock, and if the door is seven feet or over, should be hung on three butts. Where the wood work is finished in the natural wood, the butts are usually of bronze, or some of the imitation bronzes. Where the work is to be painted, the butts are usually of cast iron and painted. The most satisfactory kind of sliding door hangers are those that run on a track at the top of the door. Double acting door hinges are used on doors between kitchen and dining-room, butler's pantry, etc.



SEMI-DETACHED BRICK HOUSE.

Vestibule.—In very low priced houses, the vestibule is too expensive a luxury to be introduced, but in a good class of dwellings, where the expense is no objection, the vestibule forms an important feature. The entire vestibule should be finished in wood, either plain or paneled, according as the taste of the designer may dictate, or, according to the length of the owner's purse. The ceiling should be of wood, also paneled. Pine, or any kind of hard wood, may be used with a natural finish. All lumber must be clear, dry, and well kiln-dried. The floor may be laid in patterns of different kinds of wood, or in tile, as desired. When tiles are used they are set in Portland cement. The joists are placed three or four inches lower than the other joists, a floor is laid on top and spread with cement an inch, or an inch and a half thick, and in this the tiles are set.

Stairways.—All stairways must be built where located on plans. The main staircase must be well built and well supported, the risers one inch thick, and the treads one and one-fourth inches thick. Dimensions in all cases for height of risers and width of treads to be measured from the building. The angular space under stairs to be finished with plaster or wood paneling, as may be desired. All stairways must be put up after the plastering is dry. The attic and kitchen stairs must be built, as required by the plans, of a good quality of stock, to be well supported, to have one inch risers and one and one-fourth inch treads, well housed into wall string. The newels, rails, and balusters to be of selected, dry, hard wood, worked in accordance with the detail drawings for same. The kitchen stairs to have a two-inch, round, hard wood rail secured to side walls by wrought iron holdfasts. All cellar and outside stairways to be built on good, strong plank strings, provided with plank steps, well put up and thoroughly secured.



A BRICK DWELLING.

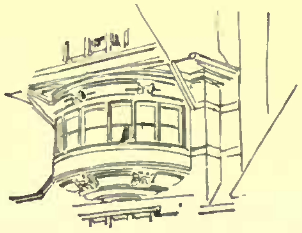
Blinds.—As the general finishing of the interior of the house progresses, the blinds may be hung and trimmed at any time. For inside blinds, the most inexpensive kind for houses of moderate cost are white pine stock blinds, hung to fold

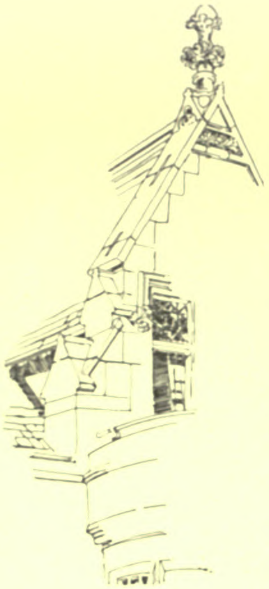
back against the wall. These can be finished in the natural pine, or stained to imitate cherry. The box shutters, or those that close in pockets, are the most desirable and also the most expensive, as a portion of the apartment must be sacrificed to make room for them ; these may be made plain or elaborately paneled and moulded, but, if the latter, they should be made of cherry or some other nice, hard wood. Sliding blinds are also used and are very satisfactory ; they are made in sections and hung on weights. Outside blinds are the most economical and perhaps the most comfortable, as they keep out the cold in winter and the sun and heat in summer. Where outside blinds are tastefully painted, they are quite artistic and add to the effect of the exterior.

Closets.—"Plenty of closets" are what the ladies usually ask for when consulting an architect with regard to plans. A linen closet, placed so as to be easy of access to all the rooms, is a great convenience, and makes a nice place to keep the bed linen, bath towels, etc. The linen closet should be fitted up with drawers and shelves. The clothes closets should have three or four shelves, one or two drawers, and a sufficient quantity of wardrobe hooks, placed on beaded cleats. It is a good plan to ventilate closets, where possible, by means of a tin tube about one and one-half inches in diameter, extending from the top of closet to attic floor.

Kitchen Pantry.—Make the kitchen pantry of good size, and, if possible, have a window in it. Shelves should be placed on all available sides, made of seven-eighths inch lumber, with standard in centre from top to bottom. Build a counter-shelf two feet wide by one and one-fourth inches thick, under which arrange for as many closets as practicable. Construct under one end of counter-shelf a revolving box for flour, lined on the inside with tin or galvanized iron, to keep it perfectly tight ; the top of lid should also be lined with tin or galvanized iron in the inside. The closets should be inclosed with panel doors. Where the space under counter-shelf will admit of it, place one-half dozen or more drawers. The shelves on one or more sides to be enclosed with panel doors. The butler's pantry may be fitted up in like manner, but should have in addition a butler's sink. The side wall of all pantrys should be ceiled throughout from top to bottom with narrow beaded pieces, three inches wide and seven-eighths of an inch thick. This should be done behind all shelving.

Wainscoting.—The kitchen, bath-room, back stairs, etc., should be wainscoted to the height of three or four feet with beaded ceiling and capped with a neat beveled and moulded cap. Should the hall, library, or dining-room require wainscoting, they should have a paneled wainscoting four or more





feet in height. In dwellings of a low cost this could not be done, but in buildings of the better class, much can be done in the way of paneled and moulded wainscoting to add to the elegance of the apartments.

Bath-room.—The bath-room is considered an essential feature in modern houses by most people, and it is advisable to have it where good sewage can be obtained. An ample tank is usually built in the attic, and by using a force pump connected with the cistern in the cellar a good supply of water can be furnished ; this is done in many cases even where they have city water in the house, using the city water for closets only. If economy is to be considered, the wood work in the bath-room may be of whitewood or pine, finished in the natural wood. The bath tub must be cased in a good and workmanlike manner. The water closet should be fitted up with seat riser and cover, seat and cover hung with brass butts. The whole should be put together so that any time it can be taken apart for the purpose of repairs, or otherwise attending to the plumbing pipes. Underneath the wash-bowl should be fitted up with narrow ceiling, three inches wide and provided with a batten door of same, properly hinged and trimmed.

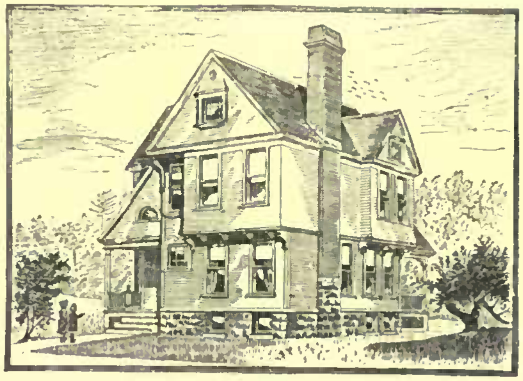
Tank.—In dwellings where plumbing is to be introduced and where city water cannot be had, a tank should be constructed in the attic or some other convenient place. The best method of building such a tank is as follows: The bottom is formed of 1 x 3 inch pieces of pine laid on edge and firmly nailed together ; build on top of the foundation thus made with 1 x 4 inch pieces of pine laid flatways and well nailed together, the corners lapped alternately, the whole to be supported on strong timbers having a solid bearing.

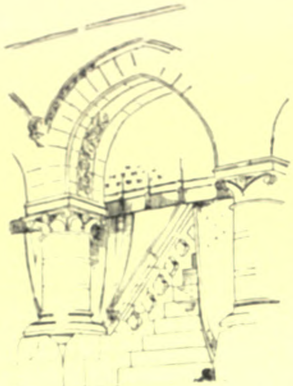
Mantels and Fireplaces.—Every well appointed house should have one or more fireplaces. A fireplace is usually worth all it costs as a ventilator, and also gives a cosy, cheerful aspect to the room. A bright fire upon the hearth sends out a genial warmth very suggestive of generous hospitality and good fellowship. If one desires an open fireplace, it can be built in a simple manner, or it can have iron back and sides with tile facings. Grates are perhaps more economical as regards the saving of fuel, and of these there are many excellent kinds in use. Tile and terra cotta facings are much used with both grates and open fireplaces. Of mantels, there are a great variety ; some are made entirely of slate, some entirely of terra cotta, and some of bronze metal, etc. Hard wood mantels are used to a great extent, and in these there is a great diversity of

design. The designing of fireplace and mantel is usually left to the discretion of the architect.

Tinning.—All tinning required to be done in connection with a dwelling should be of the best materials and executed in the best manner. For this purpose a good quality of M. F. tin can be used, and care must be taken in the lining of all gutters; all angles and valleys must be covered in the best manner, and all places, where required, must be thoroughly flashed. Leaders of galvanized iron are best. The expanding conductor pipes cost a little more but are cheaper in the end, as they do not burst with the frost as badly as the common pipes. In flashing about chimneys and other similar places, care should be taken to secure the tin into the joints of the brick work.

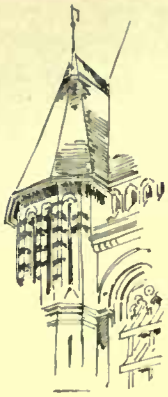
Painting.—We are now ready for the complete painting of the building. The question of how to paint a house is one that requires a person of some taste in the selection, combination and application of colors, to decide. Repose is one of the first requirements, especially in a dwelling house. To secure this result, such a selection of colors should be made as will harmonize best with the surrounding landscape, particularly if it be a country house; for this reason, warm, soft colors should be used, and cold, harsh colors avoided. Blue is a cold color, and when graded with white and black, produces shades of gray more or less cold. On the other hand, reds and yellows are warm colors, and when mixed, in different proportions, with blue, green, and the various shades of the same, render them more or less warm. We find in a study of nature that nearly all of the colors which she produces are warm; take, for instance, the various greens of the grass and foliage which we see around us in such profusion. In analyzing the greens of the grass, much yellow and some red will be found in various proportions. In the foliage of the trees there is much red and yellow, as is manifest when the latent reds and yellows make their appearance in all their varying tints and gorgeous effects in the autumn. It will be noticed, also, that the trunks and branches of trees are of brown, or some of its various shades or modifications. Brown contains red and yellow mixed with blue. In an analysis of the different kinds of wood it will be seen that they contain much red and yellow. Thus we see that all the substantial objects of nature favor warmth of color; while on the other hand the sky, atmosphere, water, shadows, are all, apparently, more or less blue. But these colors are not real, only apparent. Water has no color of its own only as it appears from





reflection or the density through which it is seen; the atmosphere looks blue, more or less, according to the distance through which we see it, and shadows partake of the colors upon which they are cast, always, however, appearing more or less blue, as may be seen in the shadows cast upon snow. Thus we see that the more unsubstantial elements in nature are made up of cold colors. In addition to those natural objects already mentioned as being of warm colors, are the different kinds of soil, such as clay, sand, etc. Most kinds of rocks and stones are of warm hues, and although there are many kinds of stone whose colors partake of gray shades, they will generally be found to contain more or less red or yellow in their composition. Thus much in favor of warm colors as applied to the painting of the exterior of dwelling houses, among which we can select warm olives, browns, buffs, reds, etc., with all their different shades and variations. After the colors have been decided upon, in order to secure the effect of repose, we should avoid using three or four colors and striping the cornices, verandas, etc., thus giving the building a spotted or patchwork effect. The best results are secured by using only two colors and painting the body of the lightest and the trimmings of the strongest color. The verandas, porches, etc., should be painted entirely of the trimming color. For the finishing of the interior of most dwellings, the natural wood finish gives better satisfaction than painting throughout. Where economy is necessary, white pine, or whitewood can be used and finished with good results. It is customary to apply three coats of hard oil finish, or wood preservative finish, thoroughly rubbing it down with sandpaper, or pumice stone and oil.

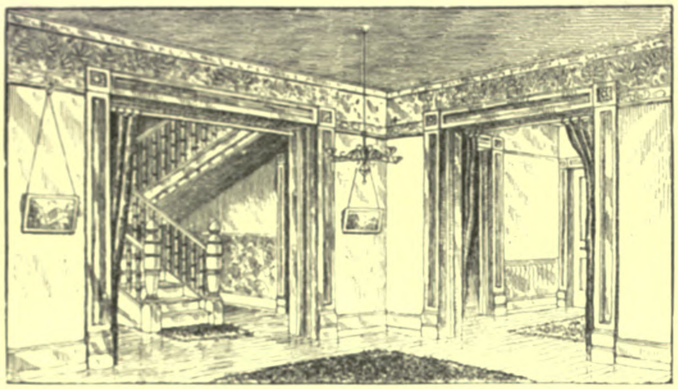
Plumbing.—All iron pipes, including both waste and air pipes, should be of the best quality, with all proper fittings, put up in the best manner with hooks and stays and the joints caulked with oakum and melted lead. All pipes must be firmly secured with metal tacks and screws. All pipes in exposed places, or pipes filled with water and liable to freeze, should be packed with non-conductive material, cased and boxed. The carpenter should put up inch beaded strips, upon which all water and service pipes should be run, so that they can be inspected at any time. No pipes should be allowed to run on the outside walls of a building unless absolutely necessary. A well appointed house is not complete without at least sufficient plumbing for a bath-room and water closet. The plumbing should be planned so as to be as much concentrated as possible, so that the plumbing in one story shall come directly over that of the one below. All sewer pipes coming under cellar bottom and connecting with the main drain should be of iron, not less than five inches calibre, as they secure a better flushing out than larger



pipes. The soil pipe or the perpendicular pipe, connecting with the water closets, etc., should be of iron, wrought iron is best, four or five inches calibre and carried up and out through the roof and capped with an approved ventilator. All of the water closet traps, and all other traps, should be ventilated from top of trap to an independent ventilating pipe, to pass out through the roof. The sewer pipes under cellar bottom should have a running trap placed on the inside of cellar wall, and from the top of this trap a two-inch iron pipe should be taken out through the cellar wall, with the mouth bent downward near soil; this will act as a ventilator and air supply. All plumbing pipes, where possible, should be kept in sight. and for this reason it is considered best not to enclose sinks, washstands, etc., but to leave them open underneath. All of the pipes in kitchen, bath-room, etc., should be placed on boards provided by the carpenter therefor. The water closets used should be furnished by some well known and responsible manufacturer of these goods. Nearly all of the first class closets are provided with a tank or cistern connecting with the closet. This tank is placed just over the water closet and secures to the closet a good flushing out. as it always provides a good head of water. Where tanks are built in attic, or elsewhere, it is best to connect them by means of a force pump with the cistern in the cellar, which latter should be of ample proportions, so that when the tank is empty it can easily be filled from the cistern. In ordering the plumbing the owner should see that the specifications are full and complete. that everything is embodied in them that he wants, and nothing in them which he does not want; that all gas pipes, water pipes, etc., are of the right kinds and sizes. Much depends on the plan and general arrangement of the house as regards the plumbing in its various details, but it is necessary to employ the best men. the best methods and the best materials in order to secure the best results.

INTERIOR DECORATION.

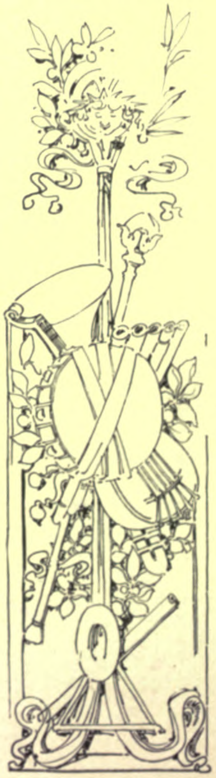
How to produce the best results for the smallest outlay of money, is the question that most often presents itself to the decorator and housekeeper. Beautiful and pleasing effects may often be obtained by the proper selection, disposition and combination of comparatively low priced wall papers; where, on the other hand, if expensive decorations were used without regard to systematic and harmonious arrangement of designs and colors, the general result would not be as satisfactory. With the great variety and the many beautiful designs to be found in wall paper at the present day, it would seem that almost any one could easily select a pleasing pattern. But the art of interior decoration involves something more than the selection of a pretty piece of wall paper and a beautiful carpet. Many other things must



INTERIOR VIEW.

be considered in connection with the selection of carpets and wall paper, as, for instance, the position they are to occupy, their relation to the curtains, upholstery, rugs, etc., with all of which they must either blend, or contrast harmoniously. Dwelling houses are often furnished and decorated in the following fashion: The owner, or his wife, or both, or some member of the family, will go to a carpet store and ask to see the different styles of carpets; after a time one is selected, possibly a very pretty one of itself; no thought, however, is given to anything but the carpet. The same routine is gone through with in regard to the wall paper, furniture, drapery, upholstery, etc. The result of this "happy-go-lucky" way of doing things is an incongruity which, to the eye of an artist who has made decoration and furnishing a study, is exceedingly irritating, as he sees at a glance what were the possibilities of the situation and how far short is the result. If by a happy accident, anything like a harmonious combination should grow out of this hap-hazard way of doing business, it is due more to the good taste of designers of carpets, decorations, etc., than to anyone else. Far better effects at much less expense can be obtained by adopting a different method. Many clients, after the building contract is finished, drop their architect, thinking that they have no further use for him. If the architect's services and advice are worth anything they ought to be of some value in furnishing and decorating. It stands to reason that one who has made such and kindred matters a study for years, should know more about them than one who has never given the subject more than a passing thought. In painting a picture, harmony of color is obtained by using, say three or four colors only, and mixing them in greater or less proportions throughout. There may be in this picture sufficient light and shade and contrast to avoid monotony, but there will also be such complete harmony as will give the beholder a sense of repose and pleasure. The same scheme of color carried out in furnishing and decorating a house will furnish similar results.

In the event of the architect being called upon to assist the owner, or some of his representatives, in selecting the furniture, planning for the decorations, etc., he would probably proceed as follows:



He would first select the carpet, which he would take for the groundwork, or key-note, to the rest of the various furnishings and decorations. If it were a dark, rich carpet, containing strong reds, blues and golds, he would decide that the general tone of the wall paper should have the same combination of colors, but lighter and brighter; in fact, there must be a harmonious contrast between the carpet and wall decorations. The frieze he would choose for this composition would be richer and brighter than the body work; something containing much gold, red and blue, and which, while contrasting stongly with the body color, would at the same time be entirely harmonious. The ceiling decorations would be of delicate tints and small figure patterns. The styling would be darker than the ceiling paper, as light colors in the angles and along the edges of the ceiling give an effect of weakness, where there should be an appearance of strength. The architect would also, in choosing the wall paper, consider that it must act as a setting to pictures, which, with their gold frames, should be thrown out in bold relief against the background. In other words, the eye should be attracted by what is placed upon the wall, such as pictures, wall cabinets, etc., rather than to the wall paper, which must be subordinate. The carpet will, in like manner, serve as a foil to the drapery, upholstery, etc., which cannot, therefore, be made too strong, but must be in sympathy with their surroundings. Having followed a systematic plan throughout, the result will be a complete and harmonious whole.

Lincrusta Walton, an elegant material resembling wood carving, or stamped leather, is much used in wall decoration. Where too expensive to be used for the entire wall it may be utilized in special places, such as over the mantel, in the spandrels and under the soffits of stairs, in panels and in place of wainscoting. It can be finished with a natural wood finish in imitation of cherry, oak, etc., and when used in place of wainscoting, or wood paneling, is much less expensive and quite as durable.

I CHEERFULLY recommend any and all of the Advertisers represented in the following pages. The goods and articles they represent I have found by experience to give excellent satisfaction, and trust that people interested in building will be benefitted by giving them their patronage.

J. H. KIRBY.

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—AND—
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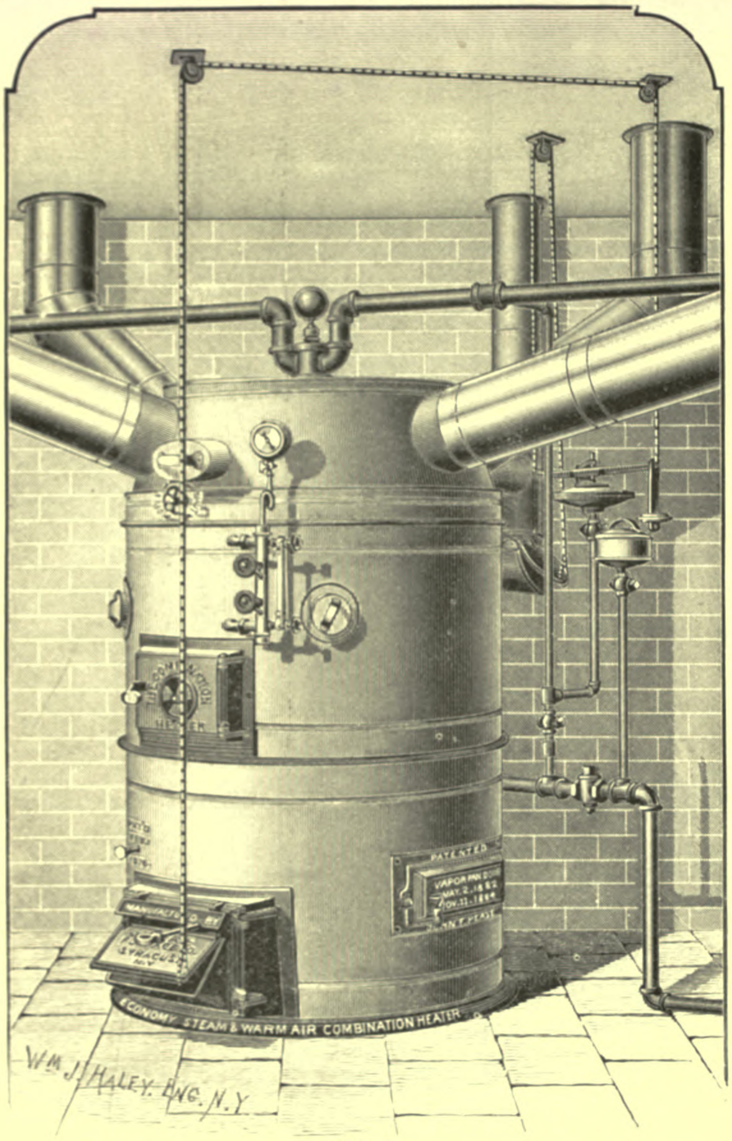
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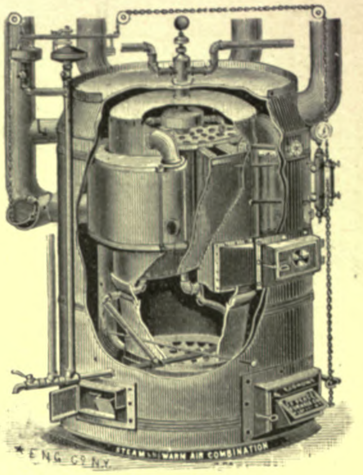

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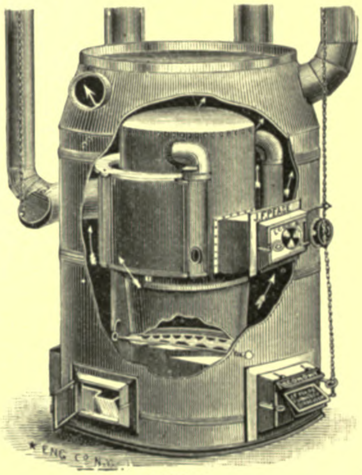

CUT C.

Cut *A* represents our Economy Warm Air Furnace and Steam Heater Combined as it looks set up in cellar or basement ready for work.

This Heater has a *Wrought Iron Tubular Boiler* suspended directly over the fire pot of our Economy Warm Air Furnace. The same fire which *produces the warm air generates the steam*, and the greatest results from a given amount of coal are obtained.

The steam is a valuable adjunct to the *warm air*, as with its help, rooms can be heated that cannot be reached with warm air pipes, such as parallel rooms a long distance from the heater, or apartments up two or more stories, not accessible by warm air pipes. The drafts to this heater are regulated automatically by the steam.

Cut *B* represents The Combination Heater with a portion of the outer casing, dome and fire pot broken away to show internal construction and working of the respective parts.

Cut *C* represents our Economy Wrought Steel and Iron Furnace with portion of outer casing, fire pot, &c., broken away to show internal construction.

This Furnace is made with an unusually large heating surface.

The parts are so thoroughly fitted together as to preclude the possibility of the escapement of gas and dust.

The dampers are perfectly controlled from any up stairs room desired, obviating the necessity of going into the basement or cellar to regulate them, as is necessary with other makes of furnaces.

We make three sizes of Warm Air and Steam Heaters Combined.

Five sizes Economy Warm Air Furnaces, portable, and three sizes to set in brick.

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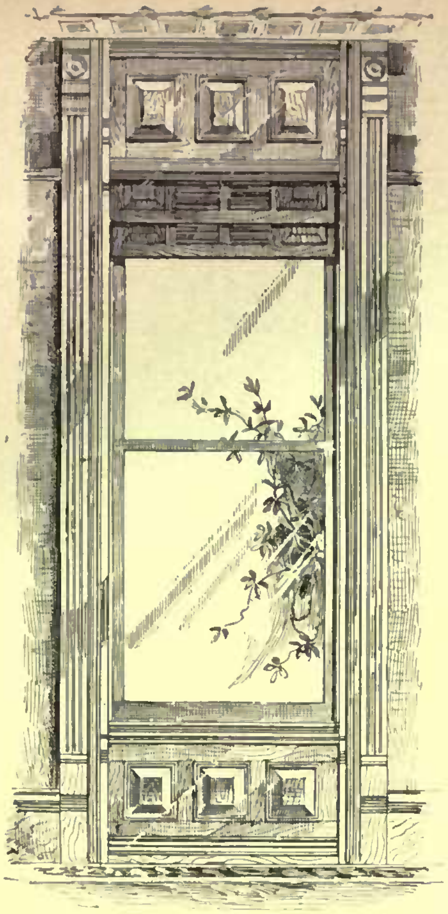

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The only Sliding Blind with Rolling Slats in any or all sections. Slats operated without the usual rod in front.

Springs are adjustable to suit weight of blinds, enabling blinds to always run smoothly and evenly in the grooves.

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All sections operate independently of each other, and are not connected by cords or otherwise.

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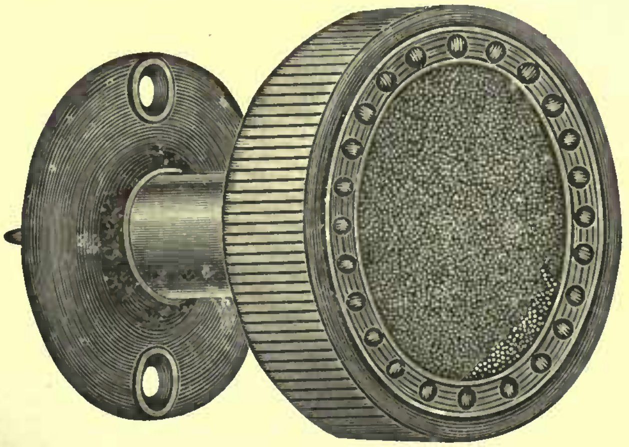
Pleasant to the hand, the most tasteful trim, and will stand as long as the doors themselves.



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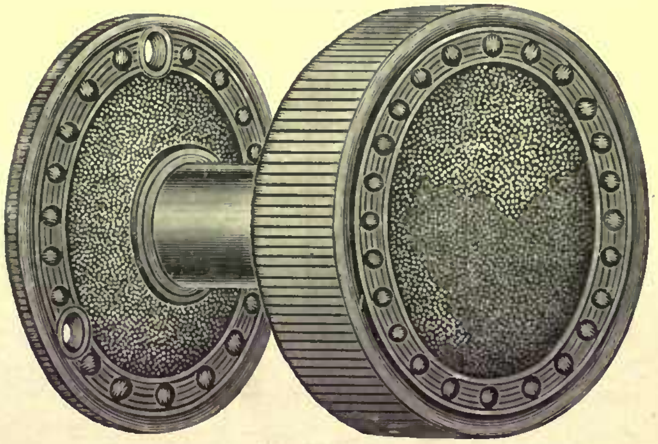

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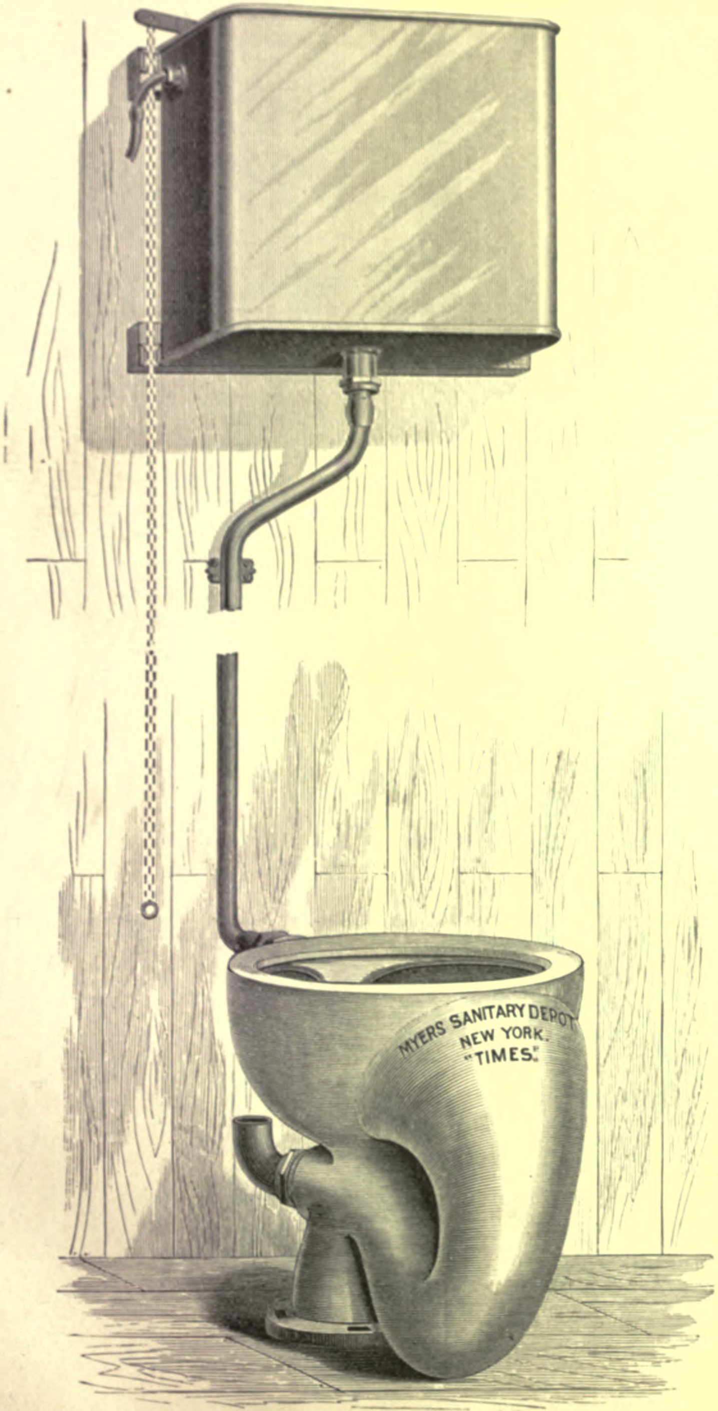

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Plate 18.

Front Outlet Washout Water Closet.

With Back Air and Local Ventilation.

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Price, Closet with Nickel Plated Copper Cistern, Pull and Chain, -	$38 00
Price, with Iron Cistern, Plate 20,	34 00
Add for Enameled Slop Safe if required,	2 50
Add for Porcelain Slop Safe if required,	3 50
Boxing, - - -	75

Size of Cistern, 14x7x14. This Cistern is noiseless in action.

(Plate 24.)

SQUARE TOP

Back Outlet Washout Water Closet.

With Back Air and Local Ventilation.

THE "TRIBUNE."

PATENTED.

Price, Closet with Painted Iron Cistern, Pull and Chain, - -	$43 00
" Closet with Galvanized Iron Cistern, Pull and Chain, -	45 00
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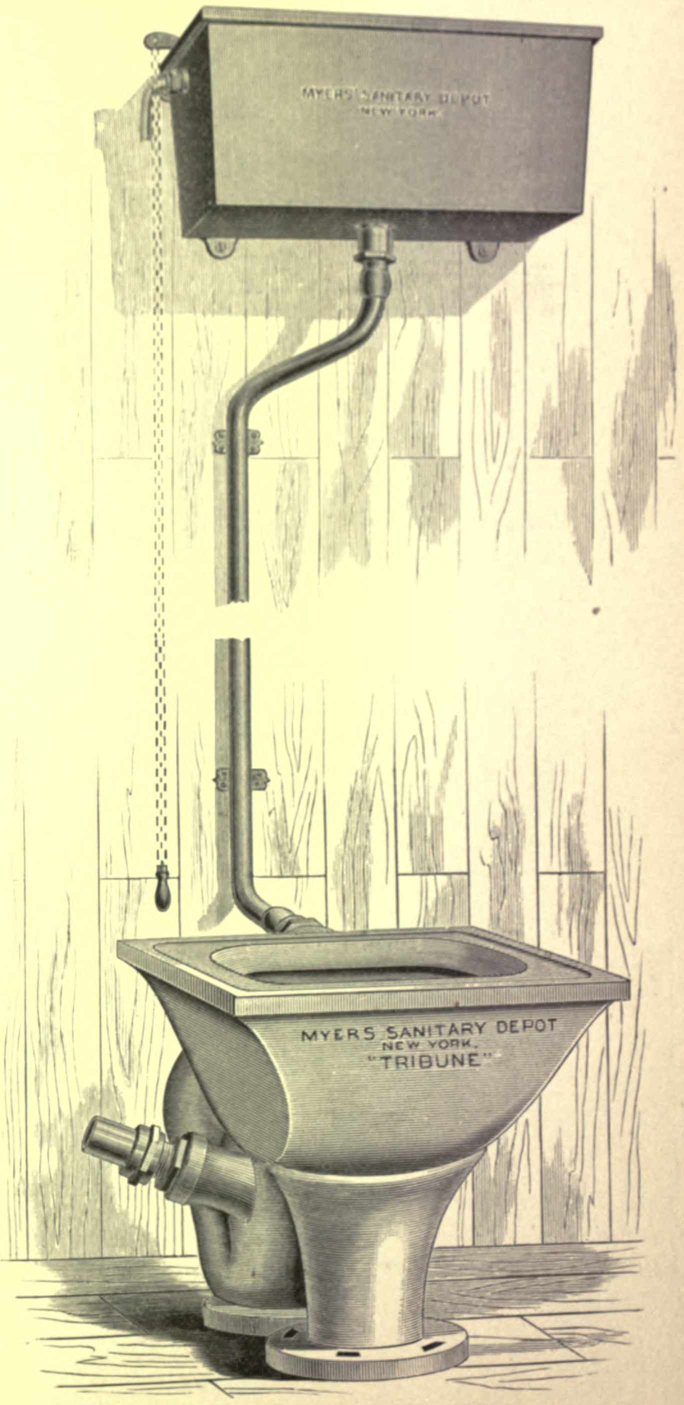

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FORCE AND LIFT

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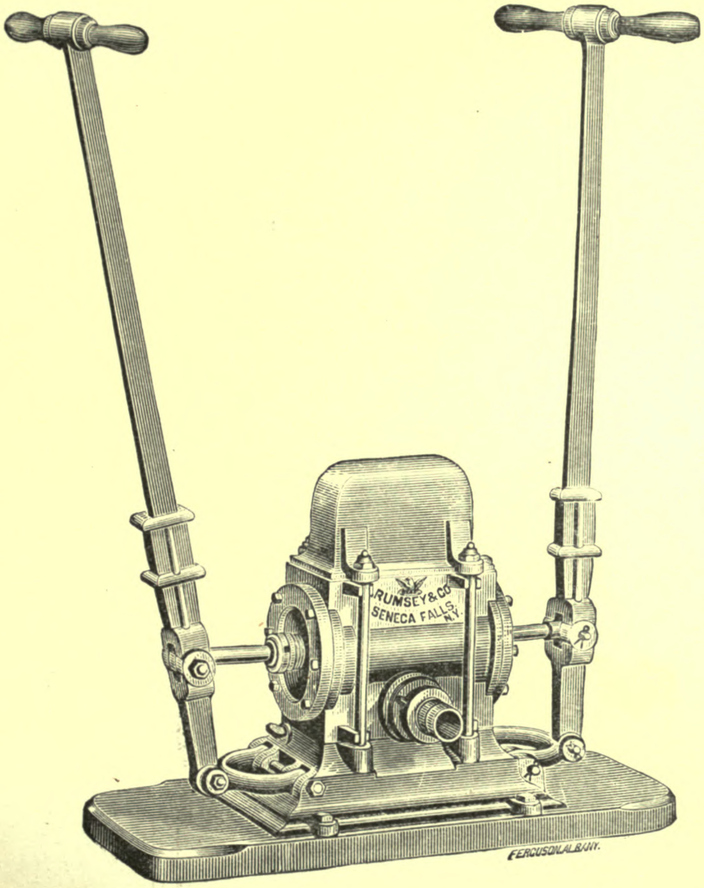
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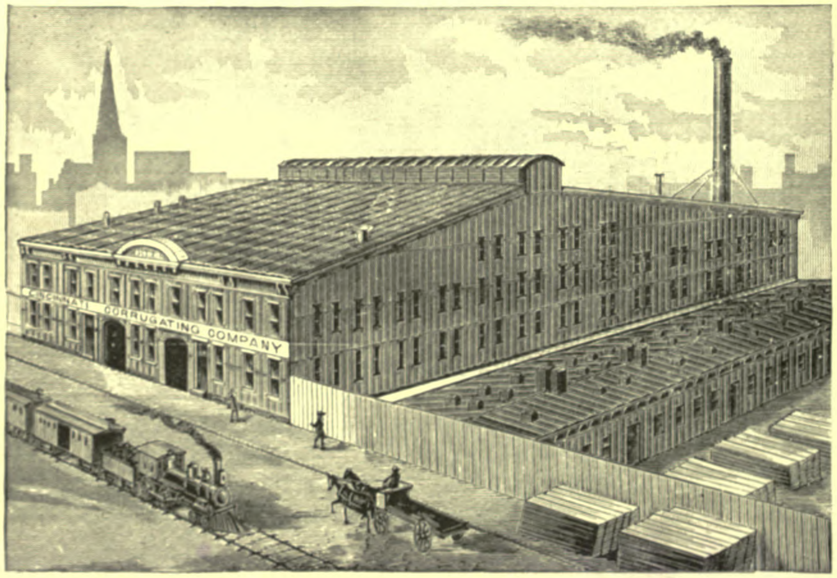

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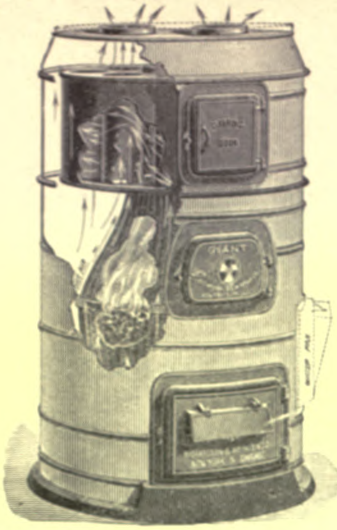
Architectural Ornamentation.

In no direction has the improved taste been more manifest than in that of adorning and beautifying the buildings, both public and private, of our American citizens, and we are glad to chronicle the fact that the dead uniform ugliness of the past is rapidly giving way to a better and more pleasing style of architecture. We now seem to have parted with the idea that a brick must always be red and of the same size and shape as every other brick, and have discovered the fact that clay can be modeled or moulded to any desired form or design, and given almost any color or shade which taste may demand. Hence, a new industry, or rather a great modification of an old one, has been inaugurated. Brick and Terra Cotta are now used for ornamentation as freely as stone and iron heretofore and with good reason, as they are not liable to be affected by our trying climate. They do not rust, scale nor crumble, being practically indestructible, either by weather exposure, or by fire, having already passed through the latter ordeal in the course of its manufacture.

Among the establishments which have established a high reputation for beauty of design, excellence of material and workmanship and taste in color and shading, we would mention THE GLENS FALLS TERRA COTTA AND BRICK CO., of Glens Falls, N. Y., who are prepared to fill orders for everything in this line of building material, from a plain brick to the most elaborate panel or cornice, either from their own designs or from those furnished by architects or others. They carry a large stock of designs and will furnish to architects, builders and others, illustrated catalogues and price list. Among other buildings we notice that the work of this company has been used in State Normal School, Albany; Sigafus Mansion, Tarrytown, N. Y.; Cornell University, Ithaca, N. Y.; College at Manlius, N. Y., and many others, both public and private, extending over a wide surface of this continent. The company will at any time furnish estimates and conscientiously fill all orders submitted to them, and we heartily commend them to the patronage of our readers.



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HEAT YOUR

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POWERFUL AND POPULAR.

GIVING

PURE AIR

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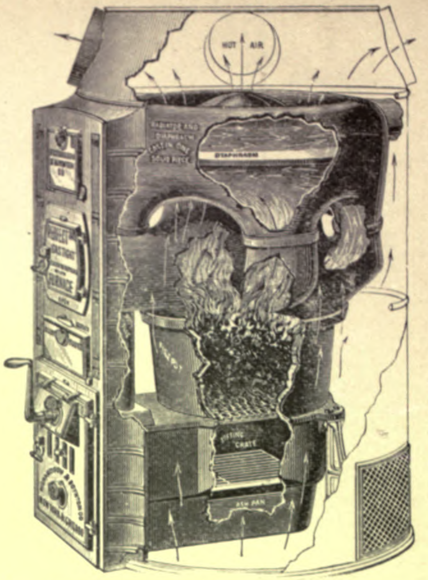

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"Perfect" return flue gas-tight Furnace.

THE BEST FURNACES TO BUY AND USE

A greater number in use, all over the country, than any furnace sold.

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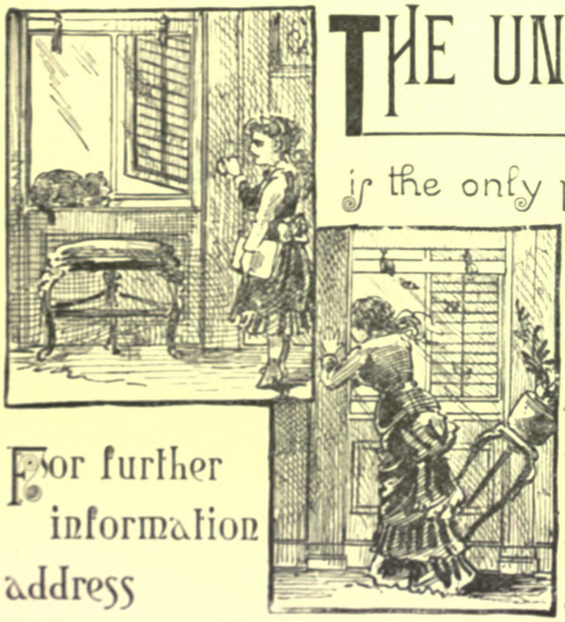
SOLD BY

BUTLER & DIEL, SYRACUSE, N. Y.

THE UNIVERSAL SHUTTER-WORKER

is the only practical fixture ever invented for opening and closing outside blinds from within the house without raising windows or disturbing window-screens. They are strong and simple; easily applied; do not get out of order; work with any hinge in general use.

Blinds can be removed without disturbing them. Invaluable in bad weather, in case of sickness, and at all times.



For further information address

Dudley Shutter-Worker Co.,

Temple Court, 5 Beekman St., N. Y. City.

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BEST AND CHEAPEST
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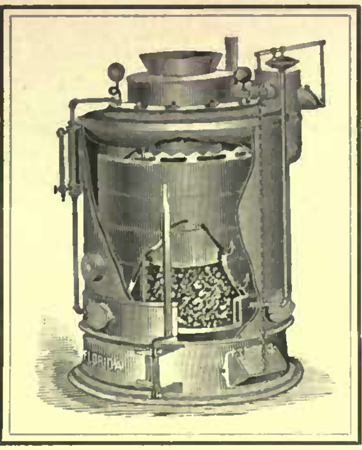
IN THE WORLD.



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HOUSE BOILER
IN THE WORLD.

Self-Feeding, Automatic, and Portable; saves the expense of brick-work, with anti-clinker, shaking and dumping grate.

Being the most modern, more are sold.

Can be thoroughly cleaned in ten minutes' time.

Being self-feeding, will run from ten to twelve hours without attention. It is double-jacketed, so does not warm the cellar.

The upright lever shakes it thoroughly, without bending the back, and not the least dust escaping.

Can be set in six-foot cellar.

It is more economical of fuel than any other heater.

1,000 Boilers in use, giving the best of satisfaction.

Send for Illustrated Catalogue. Estimates furnished on application.

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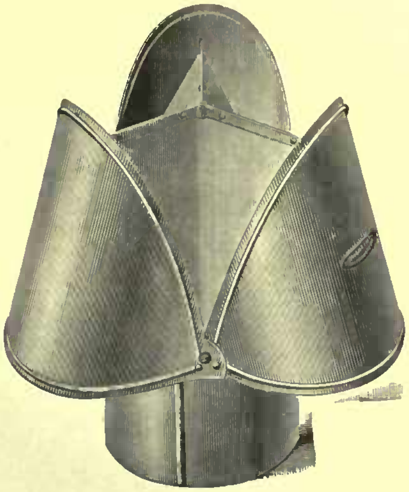

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SIMPLE. CHEAP. EFFICIENT.

Public and Private Buildings and Railroad Cars Perfectly Ventilated.

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Working models mailed on receipt of twenty cents.

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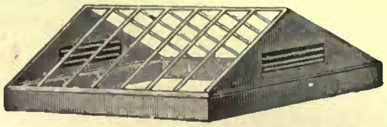

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Ventilating * Skylights.

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Cheaper than WROUGHT IRON, and vastly superior to WOOD.

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Cheap, Durable, Handsome, Fireproof. Absolutely Water-tight. Proof against Storms, Snow and Ice. Can be put on by anybody. Adapted for all classes of Buildings.

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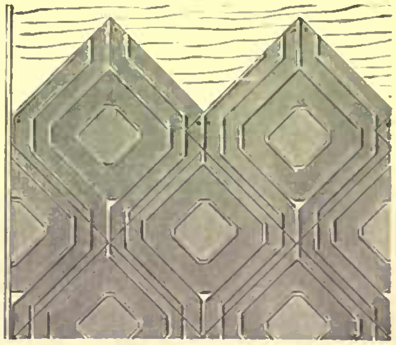


J. W. YALE,

ARTISTIC

WALL HANGINGS

AND

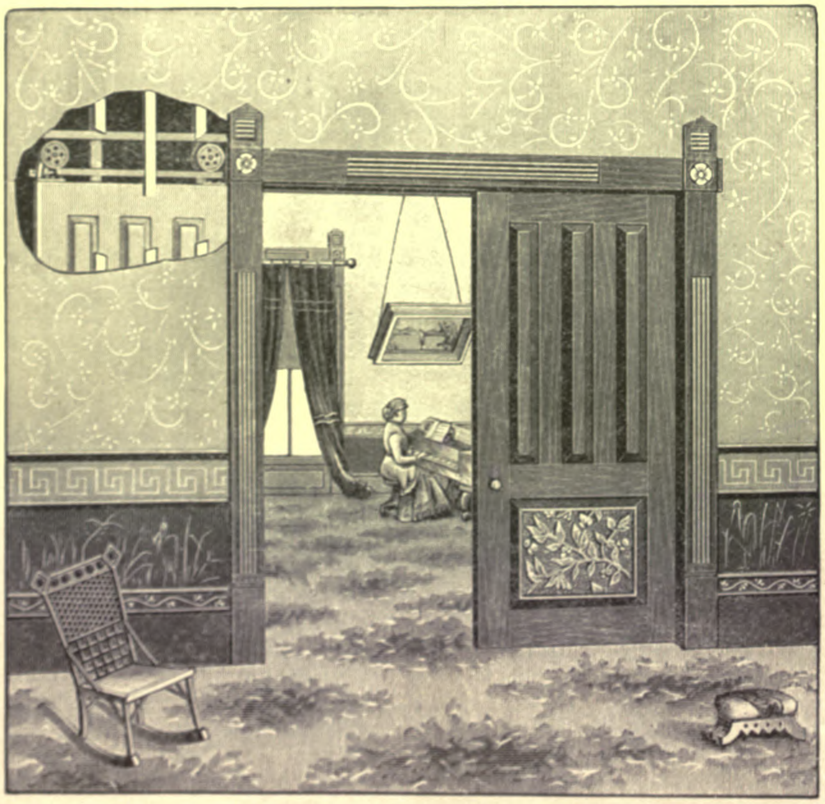
INTERIOR DECORATIONS,

62 & 64 South Salina Street,

SYRACUSE, N. Y.

The "Davis" Adjustable Parlor Door Hanger.

Patented Feb. 6 and Oct. 9, 1884, and Mar. 17, 1885.



For Any Size Single or Double Sliding Doors.

EASY TO HANG.

Do not require an expert to put them up.

No Cutting of Doors in Hanging.

CANNOT GET OFF THE TRACK.

STRONG AND DURABLE.

All Principal Parts are made of Malleable Iron and Steel, and Cannot Break.

PERFECT IN ADJUSTMENT.

Can be Adjusted in a moment up or down, and are Self-Adjusting for any unevenness of the track.

ONE SET FOR DOUBLE DOORS CONSISTS OF
Four Hangers, Two Gravity Stops,
Two Striking Plates, Two Pocket Plates,
28 ft. Hard Wood Rail, Two Floor Guides,
One Wrench, 1 doz. Square Head Coach Screws.

Full printed directions for setting up accompany each set.

Send for Descriptive Circular and Price List.

MANUFACTURED BY

THE SENECA FALLS MFG. CO.

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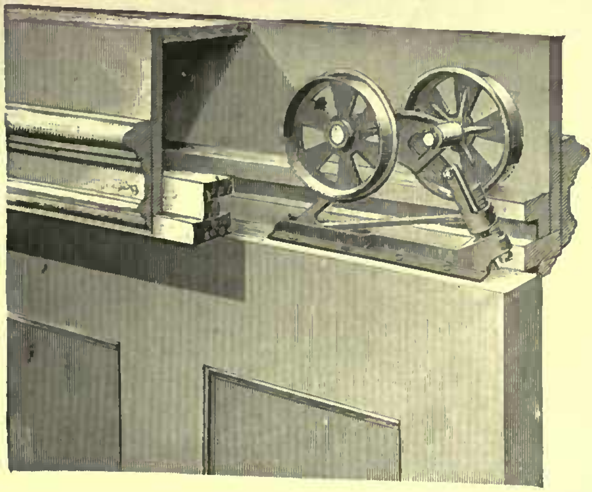
BARRY'S PATENT

Self-Adjusting Parlor Door Hanger.



ALWAYS
Runs Easily and Smoothly.

NEVER BINDS
OR RATTLES.

WHEELS
Always Square upon the Track

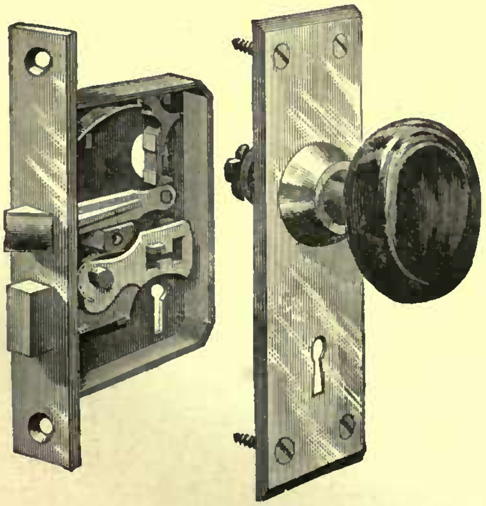
NEVER STRIKES
ON THE SIDES!

And is the VERY BEST SLIDING DOOR HANGER in the World.

MANUFACTURED BY THE

SYRACUSE BOLT COMPANY, SYRACUSE, N. Y.

THE NILES PATENT LOCKS AND KNOBS.



NO KNOBS. * NO SPINDLE. * NO KNOB SCREWS.
NO WASHERS. * ALL ROSES ELONGATED.
* NO SHORT SCREWS. *

PUT ON IN HALF THE TIME THAT ANY OTHERS TAKE.

Works easier and quicker than any others,
And can never wear out or get loose on a door.

These Locks and Knobs are now being used on many of the best buildings in the East.

MANUFACTURED BY THE

CHICAGO HARDWARE MFG. CO.

Geo. J. Wells, General Eastern Ag't, Box 3514, Boston, Mass.

HOLLENBECK'S EXPANDING SPINDLE DOOR KNOBS.

PATENT APPLIED FOR.

English Walnut, Black Walnut, Mahogany, Cherry,

Black Ash and Birds-Eye Maple.

Genuine Bronze and Berlin Bronze Mountings.

FIG. 3.

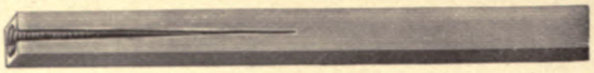


FIG. 1.

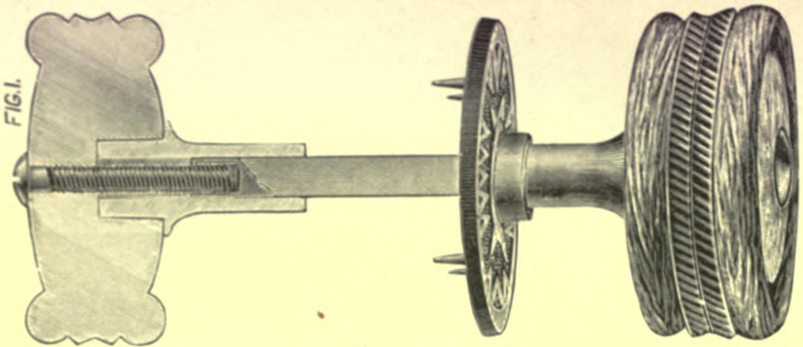
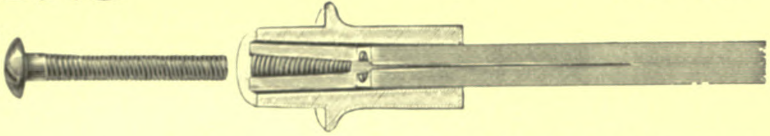


FIG. 2.



They can be used with any Lock or Latch, and should be adopted in every instance where good goods are desired.

The above cut correctly represents their construction. The Knobs are of a handsome design, are nicely finished, and made from a variety of Natural Woods.

THE ATTACHMENT readily commends itself; embracing, as it does, a combination of merits possessed by no other Knob Attachment known to the trade. Perfect adjustment to different thicknesses of doors; no washers; no rattle; no lost motion, no small screws to work loose and drop out. Any wear can be taken up by simply adjusting the screw. The Split Spindle, on entering the Shank, comes in contact with a tapering and wedging Spline on inside of Shank, and is expanded by the wedge, filling the tapering cavity in the Shank. The long screw entering, with the Spindle on all sides excepting where it has bearing on the wedging Spline, locks the whole together, making it RIGID and SECURE. Quickly done, and once properly applied, always in order.

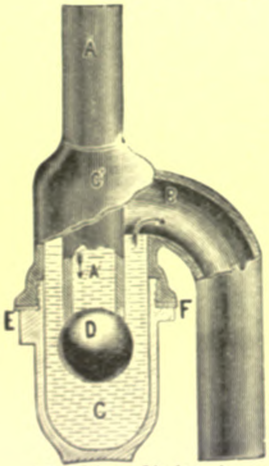
Manufactured by **HOLLENBECK & COOKER**, Syracuse, N. Y.

The Bower Sewer-Gas Trap.

A Perfect Barrier Against Sewer Gas.

AS A WATER-SEAL IT IS THE BEST. AS A VALVE-SEAL IT IS THE BEST.

Notice the following points of advantage, which are fully described in descriptive pamphlet:



1. Seal against sewer-gas under pressure.
2. Seal against absorbed gases.
3. Seal against back-water.
4. Seal not broken by syphonage.
5. Seal not broken by evaporation.
6. Self-scouring.
7. Removable Section, giving access to all portions of trap.
8. Glass Section exposing valve and water-seal.
9. Cup Part, interchangeable—may be either glass, lead, or brass.
10. Screw Joint between cup and body, being below water line, cannot be left loose for gas to escape.
11. The Hollow Rubber Valve and brass valve-seat insure a perfect joint. This valve will not pound to injure itself or seating.
12. Freezing will not injure the trap, the compression of the hollow rubber valve allowing for expansion.
13. The Floating Valve as compared with gravity valves or gates, is little or no resistance.
14. Neatness of form and adaptability to positions.
15. Simplicity in construction.
16. Sure in its action.
17. The Surest Water-seal with or without the valve.
18. The Surest Valve-seal.
19. If desired, may be ventilated as readily as any other Trap.

☞ Illustrated and Descriptive 48-page Pamphlet sent free on application.

B. P. BOWER & CO., Manufacturers,
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GRANT & DUNN,

26 EAST GENESEE STREET,
SYRACUSE, N. Y.

HAVE IN STOCK A FULL LINE OF **Builders' ✻ Hardware,**

DOORS,
SASH,

BLINDS,
GLASS,

And all other goods used in
HOUSE BUILDING.

ALSO A COMPLETE STOCK OF

CARPENTERS' TOOLS

WHICH THEY ARE SELLING AT VERY LOW PRICES.

ESTIMATES GIVEN.

FRANCIS & COMPANY,

ESTABLISHED 1865

17, 19 & 21 WEST ONONDAGA STREET,

Would ask your attention to the following specialties of which they have the sole agency for Syracuse and vicinity:

THE JACKSON VENTILATING GRATE,

THE "PEERLESS"

Shaking and Dumping Grate,

THE MURDOCK CURTAIN GRATE,

TRENT ART TILES

Willer's Patent Sliding Blinds.

ALSO IN STOCK

THE WALSH PATENT GRATE,

THE REVERSIBLE GRATE,

Artistic ✻ Open ✻ Fireplaces,

FRENCH PLATE GLASS,

PLAIN AND BEVELED,

STAINED GLASS

SPECIAL DESIGNS FURNISHED.

We have special facilities for supplying

Monumental Work

IN

AMERICAN OR FOREIGN GRANITES.

SPECIAL DESIGNS, FREE OF CHARGE.

In setting our Tiles we use nothing but the best material. We give our personal supervision, and from our long experience, we guarantee safety and satisfaction to our customers.

The EXTERIOR Stains include all the important shades used on the modern house and produce a fine, soft effect. They are very *permanent*.

CREOSOTE WOOD STAINS
MANUFACTURED ONLY BY
SAML. CABOT JR.
70 KILBY STREET
BOSTON
SEND FOR
FULL DESCRIPTIVE CIRCULAR

The INTERIOR Stains are admirable imitations of the various natural woods. They are *dissolved* in the oil and thus produce a much clearer, transparent effect than the usual pigment stains.

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Gas Fixtures, Globes,

LEAD AND IRON PIPES, BRASS GOODS, ETC.

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KEPT CONSTANTLY ON HAND.

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SANITARY WORK

IN ALL ITS BRANCHES, ESPECIALLY ATTENDED TO.

Low Prices and Competent Workmen.

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CRESTINGS, FANCY WIRE WORK,

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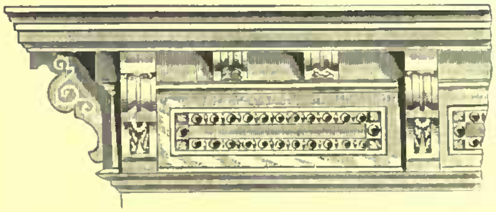

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Sheet ✦ Metal ✦ Work

Done promptly and in the best manner.

Mr. C. J. HAVENS, Manager, will give his personal attention to all work, and will be pleased to give estimates from Plans and Drawings.

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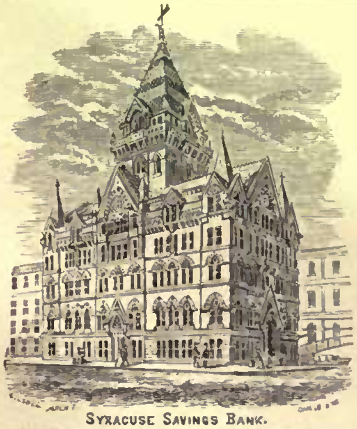

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Roofed by Talbott with Red and Black Slate

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Purple, Green, Red, Black and Variegated Slate, and Slate Mantels and Floor Tile for Sale, also Agents for

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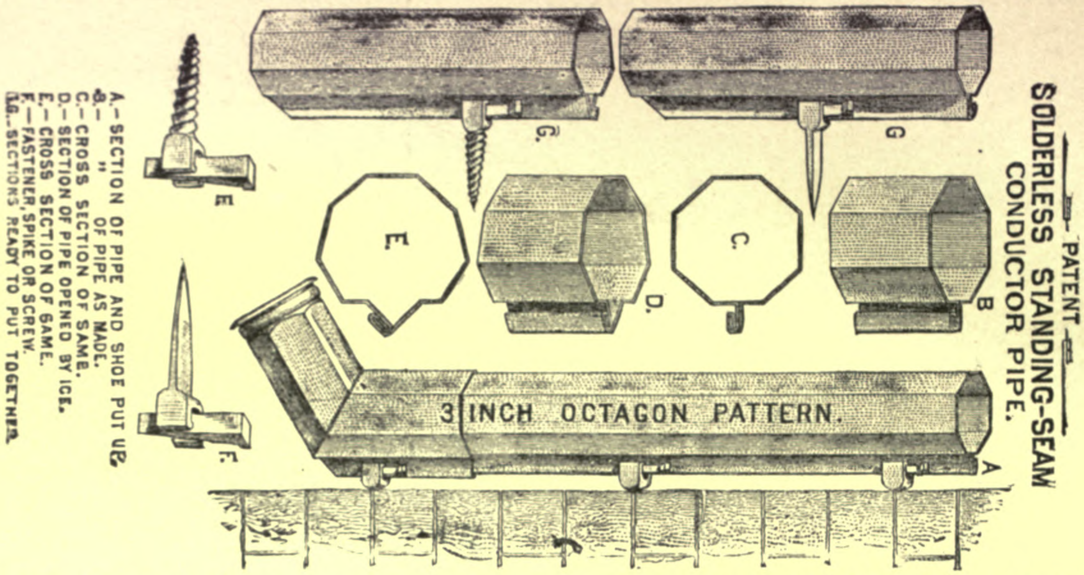
Residence, Cor. Irving and Adams Sts.

THE ONLY REAL EXPANDING WATER CONDUCTOR.

MANUFACTURED BY THE

Solderless Standing Seam Conductor Co., 163 Lacock Street, Allegheny, Pa.


A.—SECTION OF PIPE AND SHOE PUT UP.
B.— " OF PIPE AS MADE.
C.—CROSS SECTION OF SAME.
D.—SECTION OF PIPE OPENED BY ICE.
E.—CROSS SECTION OF SAME.
F.—FASTENER, SPIKE OR SCREW.
G.—SECTIONS READY TO PUT TOGETHER.
PATENT
SOLDERLESS STANDING-SEAM CONDUCTOR PIPE.
3 INCH OCTAGON PATTERN.
A
B
C.
D.
E.
E
F.
G.
G

Made in 6 foot lengths, of a single sheet of SOFT STEEL, Galvanized, Kalameined or Leaded.

The STANDING SEAM allows of an easy and secure fastening, keeping the pipe far enough from the wall to make any overflow from the eave pipe or head, run down the spout and not the wall; and it will open in case of freezing, so as to prevent bursting, and still remain double locked and water tight.

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Gold and Metal Leaf, BRONZES, &c.

Wax and Paper Flower MATERIALS.

Instruments, Papers, &c. FOR DRAUGHTSMEN.

CONVEX GLASS And Florentine Liquid Colors.

TO ARCHITECTS, BUILDERS AND DECORATORS,

WE RECOMMEND OUR

Paragon Wood Finish AND OIL SHELLAC.

and R. M. Stains Can be used over bare wood or surface finish.

COACH COLORS, VARNISHES AND BRUSHES A SPECIALTY.

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Builders' Supplies,
and Show Cases,

Doors, Sash, Blinds and Mouldings,

FRENCH, AMERICAN AND ORNAMENTAL GLASS,

PAINTS, OILS AND VARNISHES

Carpenters' and Mechanics' Tools, Etc.,

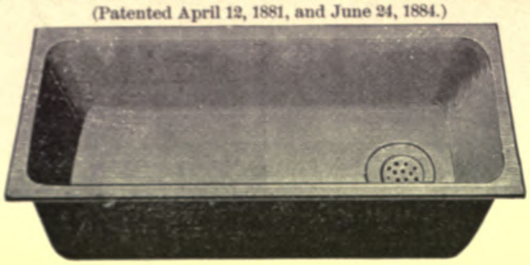
47 South Salina Street, SYRACUSE, N. Y.

THE KILBOURNE & JACOBS MANUFACTURING CO.,

COLUMBUS, O.

THE "COLUMBUS" WROUGHT STEEL SINK.

(Patented April 12, 1881, and June 24, 1884.)



KITCHEN SINKS.

These Sinks are made from one plate of steel and are superior to cast-iron sinks in every particular, being LIGHTER, STRONGER and MORE DURABLE.

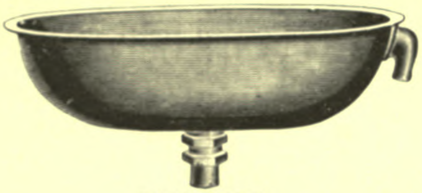
It is well known that cast-iron sinks break easily in shipping, storing, placing in position for use, and from various other causes, adding largely to average cost to plumbers and dealers, and annoyance and loss to users.

These Sinks, being of WROUGHT STEEL, will not break from HEAT, COLD, OR ANY CAUSE WHATEVER. Steel being less porous than cast-iron, they are comparatively odorless, and their greater elasticity avoids the breakage of dishes.

The bowl and projecting thimble are stamped in one piece from the same plate, and we are enabled to attach strainer and pipe more satisfactorily than is possible with cast-iron sinks.

Our new coupling, for either wrought iron or lead pipe, is pronounced by all plumbers the best on the market.

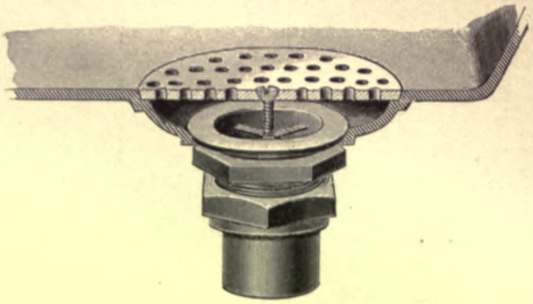
We furnish these Sinks painted and galvanized, at prices—freedom from breakage considered—less than for sinks made from cast-iron.



OVAL SINKS.

One size only, 14x20x6. Patented April 12, 1881, and June 24, 1884

METHOD OF CONNECTING PIPE.

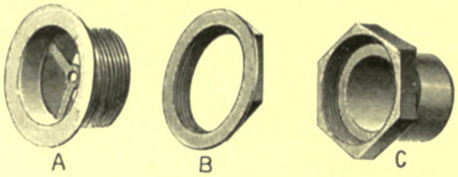


(Patent applied for.)

The above cut represents our new coupling complete, attached to sectional view of sinks; beneath is the coupling detached. "A" the ferrule, having one end flanged to fit neck of sink. "B" is a lock-nut. "C" is a standard coupling.

In making connection, drop ferrule, "A," through neck of sink, screw lock-nut, "B," against nipple of sink, making tight joint. In connecting iron pipe, attachment is made direct to ferrule, "A," which has the standard pipe thread, by means of a common coupling. In attaching lead pipe, solder pipe to coupling, "C," then screw the coupling to ferrule, "A."

This method of attachment is simple and reliable. It avoids work in a cramped position. There can be no leakage. Strainer is held in position by brass screw passing into lug on inside of ferrule, "A," and can be removed and dirt forced from pipe without disconnecting pipe from sink. Entire coupling is of brass and furnished with rubber gaskets without extra charge.



"THE CAST SINK MUST GO."

CARPENTER, DE PUY & CO.,

General Wood Workers.

WE MANUFACTURE TO ORDER ALL KINDS OF

Ornamental * Work * for * Exterior * Finish

FOR

Dwellings, Churches, Hotels, Stores, &c.,

SUCH AS

Brackets, * Columns, * Mouldings,
Balustrades and Frieze Work.

ALSO,

CARVINGS OF EVERY DESCRIPTION.

Below we offer a few Names as Reference:

Hon. F. Chamberlin, -	Hartford,	Conn.
Mr. John Rockell, - -	Tarrytown,	N. Y.
Mr. J. M. Belden, - -	Syracuse,	"
Burhans, Black & Co., - -	"	"
Hon. H. L. Duguid, -	"	"
Hon. Francis Hendricks, -	"	"
Hon. Frank Hiscock, -	"	"
Mr. H. S. White, - -	"	"
Mr. Delos Bauder, -	Cortland,	"
Hon. L. J. Fitzgerald, - -	"	"
Mr. J. W. Griffin, Architect,	Watertown,	"
Mr. Noah Dillenbeck, "	"	"
Mr. H. Chamberlin, -	Seneca Falls,	"
Rhinebeck Savings Bank,	Rhinebeck,	"
Mr. J. H. Woodruff, - -	Auburn,	"
Mr. Geo. D. Harder, -	Cobleskill,	"
Mr. M. P. Mason, - -	Carthage,	"

We also furnish all styles of

INTERIOR FINISH

SUCH AS

Mantels, Book Cases, Stairs, Ceilings, Wainscotings, Vestibules, Doors, Casings, Base, Church Seats, Desks for Banks and Offices, Partitions, Inside Shutters, Sash and Glass.

In fact we are prepared to furnish all of the above work and put it up all complete in any Style of Finish.

ESTIMATES FURNISHED UPON APPLICATION AND SATISFACTION GUARANTEED.

10 MULBERRY STREET, SYRACUSE, N. Y.

AYLING & DEAN,

MANUFACTURERS OF

Star Paint and Brooklyn Lead Ready Mixed Paints.

DEALERS IN

Wall Papers and all Painters' Supplies.

AGENTS FOR

BUTZ & PFLUEGER'S PARLOR CARD BOARD CORNICES & CENTRE PIECES,

49 East Genesee Street, 3 doors East of Post Office,

SYRACUSE, N. Y.

GUARANTEED ROOFING PLATES.

"Gilbertson's Old Method" Dipped, Extra Heavily Coated and "Camaret" Roofing Plates,

EVERY SHEET STAMPED.

Many complaints from roofers and others having reached us that cheaper plates were used where the "Gilbertson's Old Method" dipped extra heavily coated and "Cameret" guaranteed plates were required, the makers of the above are now *stamping every sheet*, not only with the name of the brand, but its thickness as well—IC or IX.

We guarantee the "Gilbertson's Old Method" to weigh more per box than any other extra coated plate in the market. The net weight of the 112 sheets in box to average in weight from five to fourteen per cent more than any other Old Style of extra coated plates that are manufactured ; and if not found so, the boxes can be held subject to our order.

We guarantee the "Camaret" Roofing plates to stand any practical test in bending for roofing purposes. Sheets to be well coated, well selected, and the box, therefore, practically free from wasters. The large and increasing demand for the "Camaret" brand (sold by us under a POSITIVE AND DEFINITE GUARANTEE as to material, coating and careful assortment), is sufficient evidence of the appreciation of same by the trade at large. Each and every box is strapped, and contains a card with the name of party assorting same. The coating of this popular brand has lately been improved by the manufacturers, and the sheets present a handsome mottled appearance. We carry this favorite brand in stock, both with and without the Palm Oil Coating, and in ordering please state which is wanted.

The only difference between the two above named brands is that the "Gilbertson's Old Method" is allowed to retain all the metal coating that it will absorb, whilst the coating of the "Camaret" is partly stripped ; that is, the coating has been reduced by passing through rollers ; both brands being made of exactly the same material.

Full stocks of "Gilbertson's Old Method" and "Camaret" plates are carried in New York and Chicago, as well as in Philadelphia.

MERCHANT & CO.,

525 Arch Street, Philadelphia. ⁂ *90 Beekman Street, New York.*
135 Lake Street, Chicago.

BUNDY

Hot Water and Steam Radiators.

MANUFACTURED BY

A. A. Griffing Iron Co.,

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Communipaw Avenue

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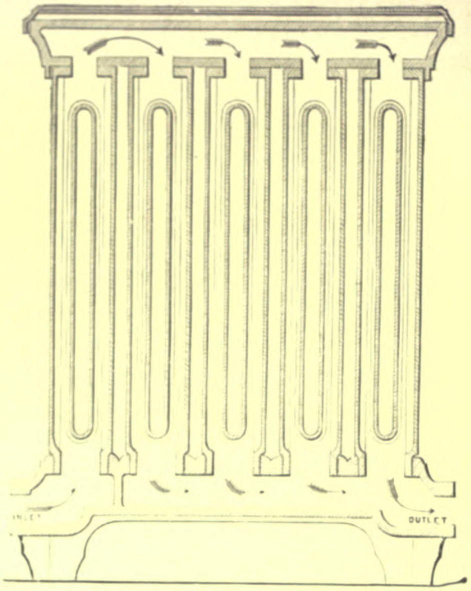

CROSS SECTION VIEW OF

BUNDY HOT WATER RADIATOR.

BEFORE DECIDING

ON THE MANNER OF

Heating your Buildings

IT WILL PAY YOU TO

SEND FOR DESCRIPTIVE CATALOGUE.

SOME OF THE ADVANTAGES OF HOT WATER HEATING.

First. Hot Water Radiators will heat with a low fire, while with steam radiation no heat is given off by the radiators until steam is generated.

Second. Should the fire be neglected and the temperature of water in boiler get below 212 degrees, steam radiators will cool instantly, although the fire may be burning and the fuel wasting, while Hot Water radiators will continue to give out some heat as long as there is any fire under the boiler.

Third. The heat of steam radiation cannot be controlled as well as that of Hot Water, as steam gives out about the same amount of heat whatever may be the temperature of the external air, while with Hot Water, as soon as the fire is lighted, the water begins to circulate and heat is given out, which heat increases until the water reaches the boiling point. The apparatus should be constructed so as to warm the building in the coldest weather with the temperature of water at 200 degrees, or even less. In moderate weather the heat can be reduced by partially stopping off the circulation of the radiators or moderate firing: so by burning more or less fuel the heat can be increased or diminished at pleasure.

Fourth. A radiator in one room can be run to its fullest capacity, while others can be partly, or entirely, shut off, without noise or interfering with the working of the apparatus.

Fifth. Hot Water radiators can be used for steam heat in the coldest weather and for hot water in moderate weather.

Sixth. There is no danger from fire or explosion, as the boiler is open to the air through the expansion tank.

Seventh. Hot Water heat is considered very healthful for dwellings; and it is well known that in houses where hot air furnaces were used house plants would not thrive, but after hot water heat was introduced the same variety of plants were grown successfully. Quoting from an article by J. Drysdale, M. D., and J. W. Hayward, M. D., of England, published in *The Health and Comfort in House Building*, they say: "As a proof of the healthfulness of Hot Water heat, we may notice that one of us, who has lived four years in a house heated by the Hot Water system, is a general practitioner of medicine, which involves being frequently called out at all hours of the day and night; yet no increased liability to cold or delicacy of any kind has been observed; on the contrary, whereas previously, when living in ordinary houses, he frequently suffered from bronchitis and quinsy, he has never had either disease since living in his present house; and a member of his family, who had previously to spend several winters in a warm climate, is now able to remain at home and go about in the open air all the year round. For prevention of disease we hold such a house to be a most important auxiliary."

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